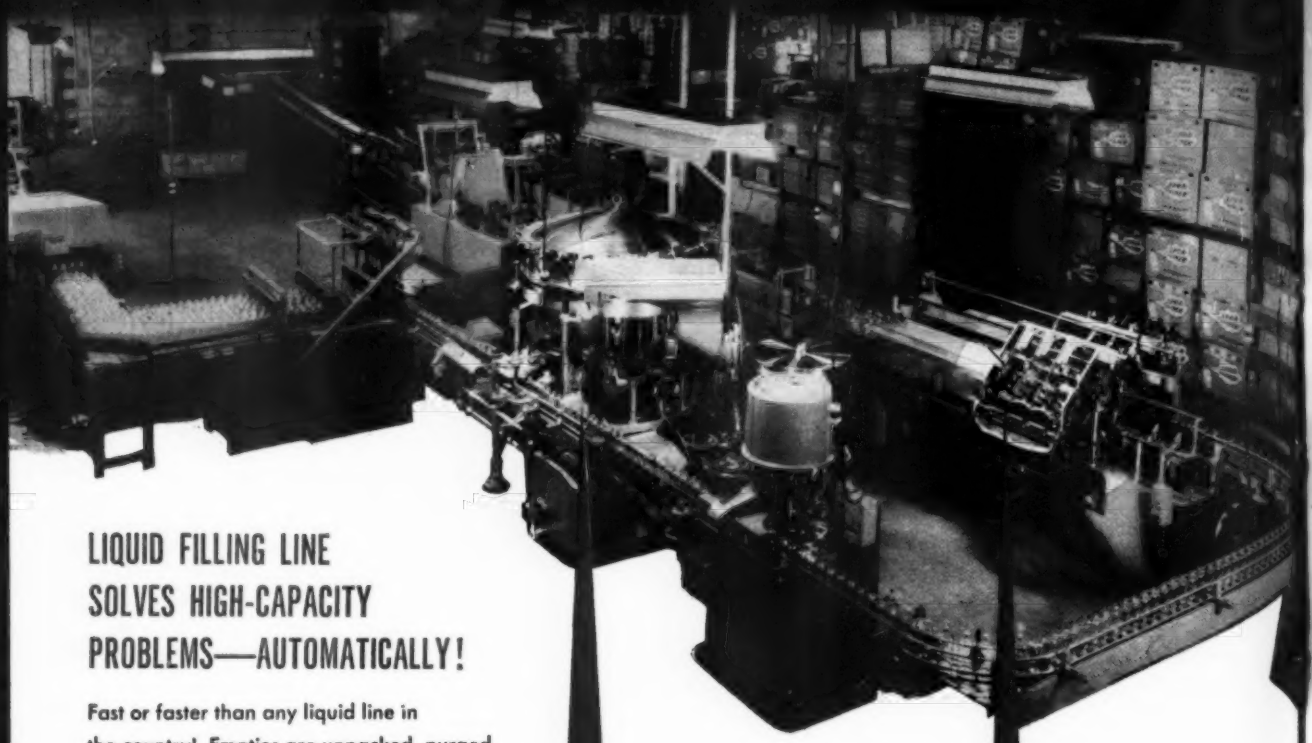
# AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

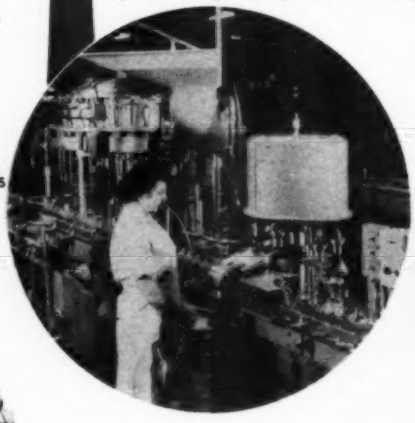
# now we can fill 15,000 BOTTLES of YOUR PRODUCT every hour...



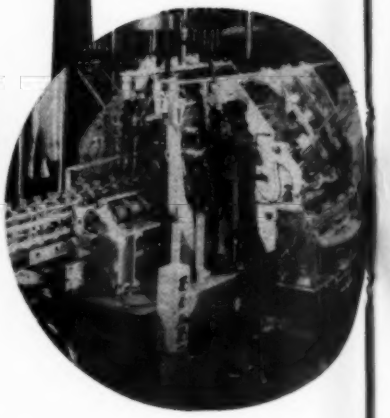
## LIQUID FILLING LINE SOLVES HIGH-CAPACITY PROBLEMS—AUTOMATICALLY!

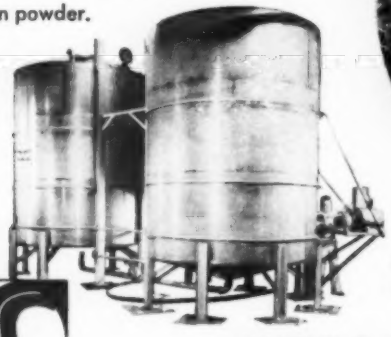
Fast or faster than any liquid line in the country! Empties are unpacked, purged, filled, capped, labeled, and delivered to trailers in sealed cartons—in one *continuous* operation. Handles any bottle up to 1 gallon, including high-density polyethylene. Call or write today for details about Stalfort, the nation's largest aerosol loader and custom filler of conventional packages. Also, a high speed sanitary line for food or pharmaceuticals —even powder.

**NO IMPURITIES!** *Vacuum-cleaned bottles speed through rotary filler and capper.*



**NO OFF-CENTER LABELS!** *Any size or shape labels placed front and back by electronic timer.*





**NO "DOWN" TIME!** *Sanitary storage tanks hold up to 15,000 gallons for continuing operation.*

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## aerosol products

packaged with

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## Customized spray valves

**Sales success** in aerosol products depends as much on the performance of the package as on the quality of the product itself. How important, then, to exercise *extra care* in the selection of the spray valve—the most important factor in pressurized packaging performance!

A-R-C Spray Valves offer you the industry's *widest choice* for every application. *Three* basic types—expanded into hundreds of specific variations with stock components—give you the *exact valve* for your particular requirements . . . at no premium in cost.

To ensure successful sales of *your* aerosol package, specify an A-R-C "Customized" Spray Valve—meticulously engineered and manufactured to the highest quality-control-standards.

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***Write us on your firm's letterhead for a sample.***

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THIS MONTH'S COVER

One of the first food products in a coated-glass container is "Taste Tap Spray 'O Garlic", which was introduced last month by Gard Pressure Foods Corp., Northfield, Ill. Owens-Illinois container is capped by a Newman-Green valve. The story of the 14-year development of this type of container is described in a special article on glass containers on pages 26-27.

APRIL, 1960 VOL. 5, No. 4

# AEROSOL AGE

The magazine of pressure packaging

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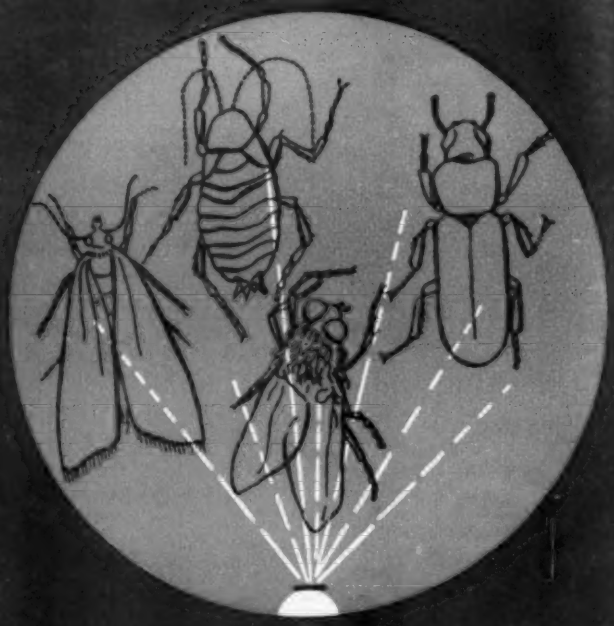
*For the most effective aerosol insecticide use Prentiss new process*



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**Our new Pyrethrum and Pyronyl Concentrates in your aerosol will give the most deadly weapon available in the fight against industrial and household pests.**

**Full potency Pyrethrum concentrates having no ugly green or yellow precipitates are completely soluble in kerosene — no filtration during manufacture needed They are compatible in all carriers and completely stable.**

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## the EMSON METERED VALVE*

Some of the various dosage valves produced by Emson

. . . the metered valve, proven by time and use to be the right valve for pharmaceutical, cosmetic, household, garden and chemical products.

### This is the way it works:

Simply depressing the button (#9) first closes the inlet valve and then opens the outlet valve to release material trapped in the tank through the orifice (#10). Regardless of whether the button is depressed slow or fast, the same amount comes out each time.

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- When the valve is actuated, the RETURN SPRING (#3) exerts pressure against the INLET SEAL (#2) to assure maximum sealing of the inlet valve. (Drawing shows outlet valve open and inlet valve closed).
- The TANK (#4) can be varied in size depending on the size of the dose required. It is made of stainless steel. (Other materials, such as brass, tin plate and plastic can be used).
- EMSON'S exclusive dome type "mounting" FERRULE (#5) makes a positive seal with the tank.
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- (#7 and #7A) are important BEARING POINTS which guide the long movement of the stem to prevent any tilting. (Tilting of the stem causes leakage). This patented feature is exclusive with EMSON.
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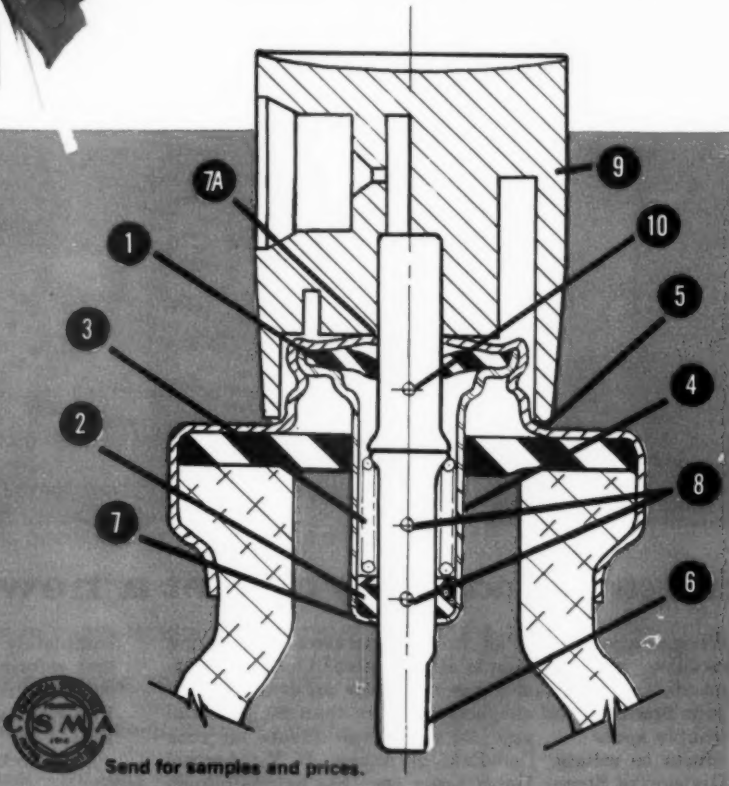
* Covered by patent #2,721,010 and other patent pendings in U.S. and foreign countries.

Don't forget to inquire about the New EMSON Nitrogen Metered Valve.

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your aerosol product deserves the best in valves!

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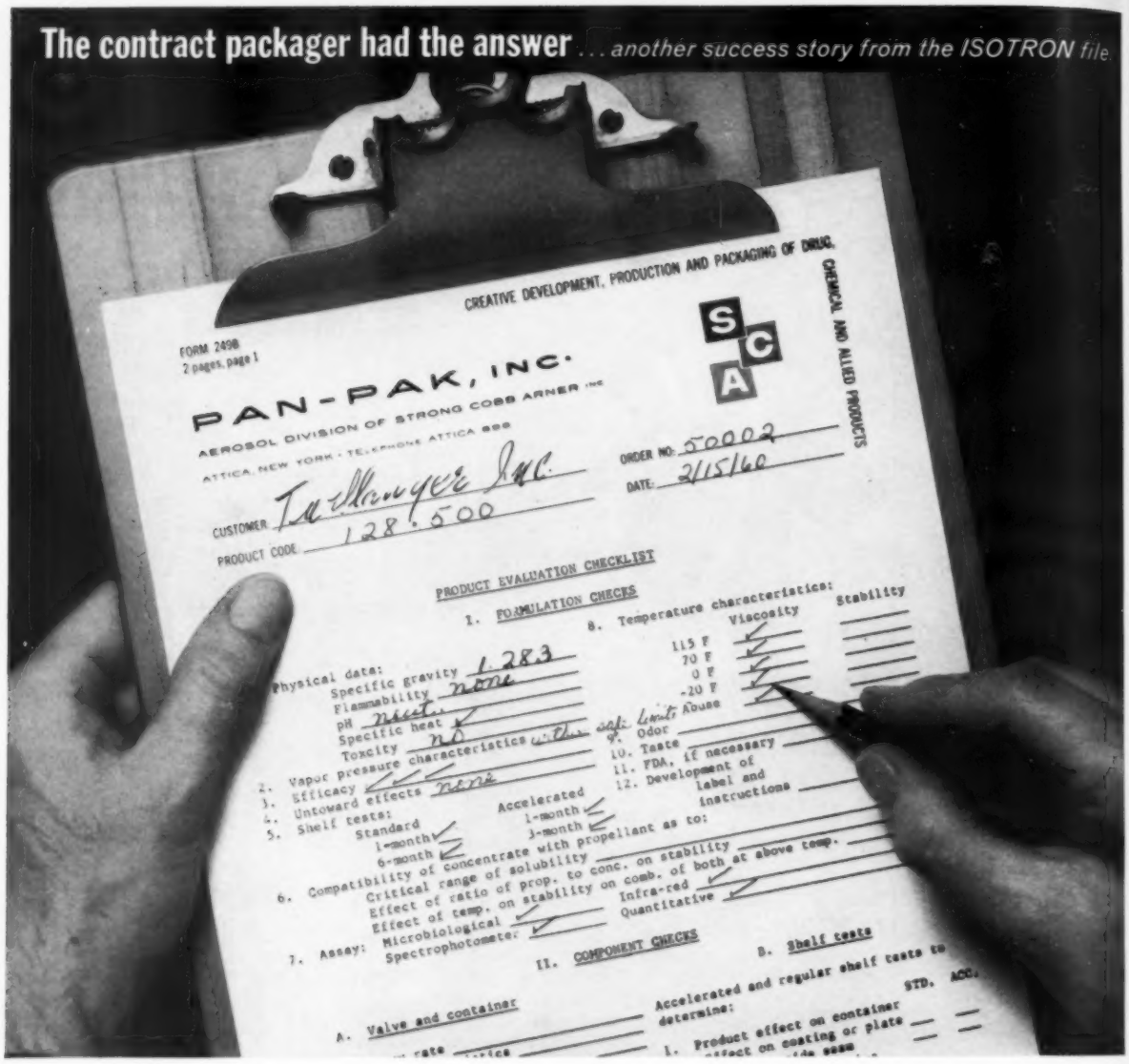
**The contract packager had the answer** ... *another success story from the ISOTRON file*




## *he gets the facts* . . . you get a new aerosol product!

When you go to Pan-Pak, Inc. with an aerosol packaging problem . . . a problem is all you need! Once this outstanding contract packager has made an evaluation of your product, and checked for more than 60 potential trouble spots . . . you can relax, and devote all your efforts to selling. Pan-Pak, of Attica, N. Y., Aerosol Division of Strong Cobb Arner Inc., has helped launch many successful aerosol products . . . is well equipped to do the same for you from offices in New York, Cleveland, Buffalo and Canada.

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One important phase of the contract packager's service is recommending the best container, valve and propellent for your use. Packagers everywhere recommend Pennsalt ISOTRON® . . . the extra-pure, extra-dry propellents that are factory-sealed for your protection.

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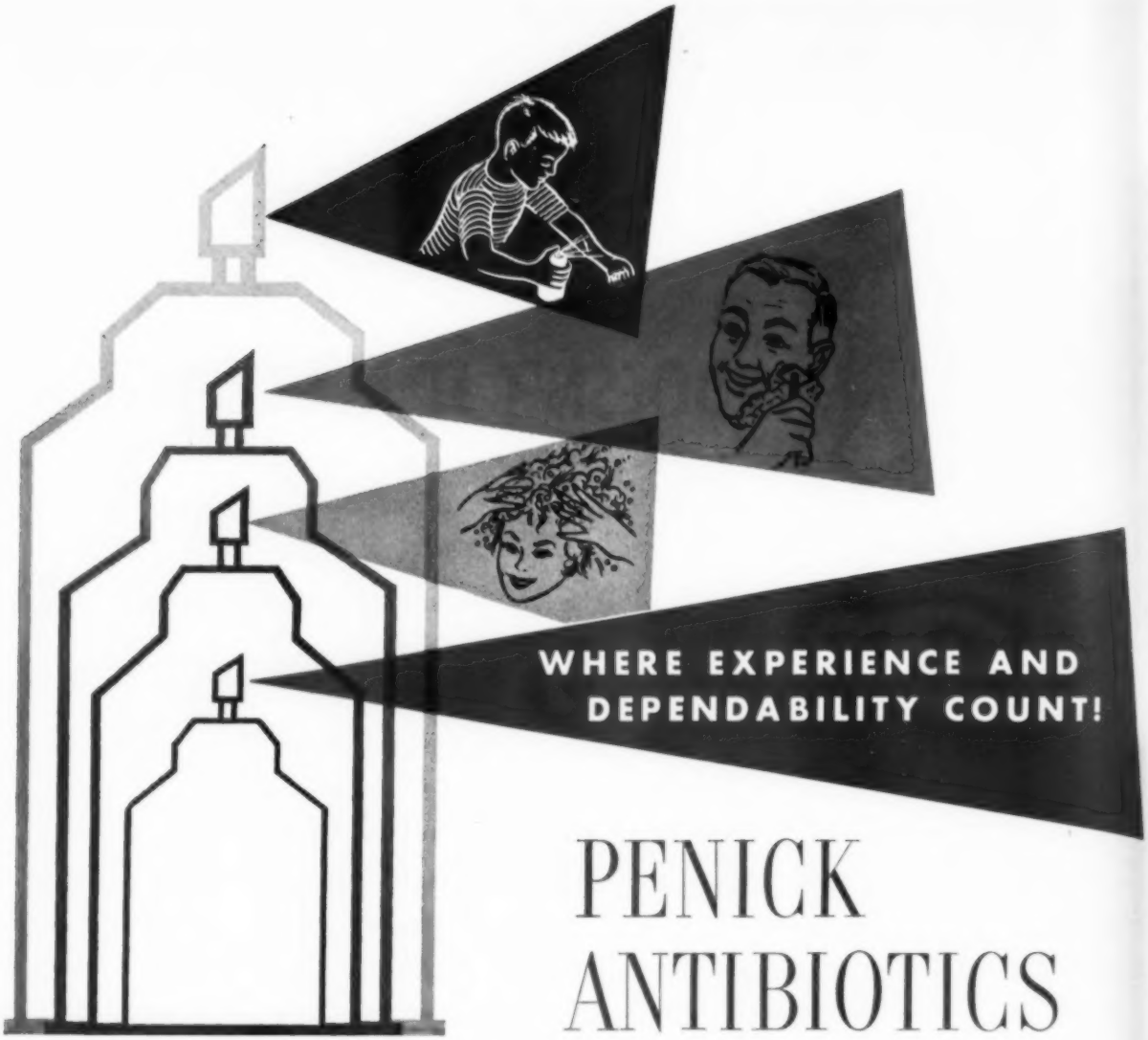


# PENICK ANTIBIOTICS

## help new aerosol products grow

Interest continues to increase in aerosol packaging of pharmaceutical and cosmetic preparations incorporating antibiotics.

As leading suppliers of "special use" antibiotics, Penick is in an ideal position to help you participate in this growing market. Penick's tyrothricin, gramicidin, bacitracin, neomycin sulfate, neomycin palmitate, and other neomycin derivatives can pack new value and sales appeal into a wide variety of aerosols. Examples of products: spray bandages, anesthetics, shaving creams, antiseptics, skin creams and shampoos.

Our technical staff can supply experimental samples, suggest applications, offer starting formulations, recommend propellants, and coordinate stability tests for you. Inquiries will be discussed in strict confidence.

PENICK

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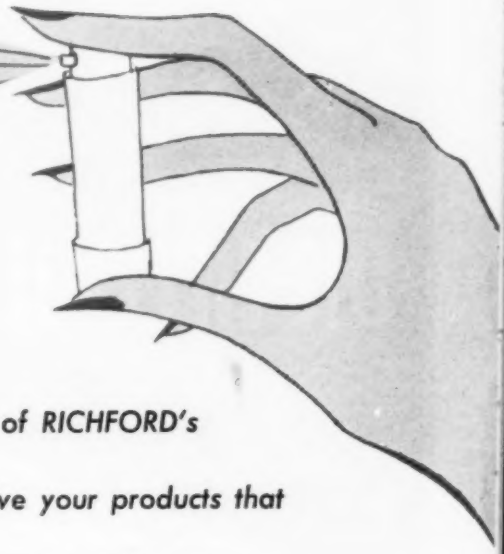
# *Your Product Deserves Richford's*

# TOUCH-N-SPRAY®

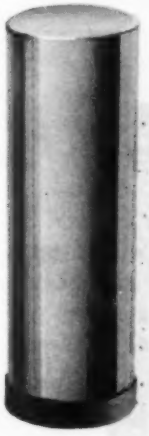
**purse size aerosols**



*the beauty and elegance of RICHFORD's aerosol containers give your products that eye-catching "plus value" to insure retail sales.*

**STYLE #1**

Wide choice of color and color combinations in refillable plastic containers. Available in 2 styles of spray heads with brass shell in polished or design background.



***Write now for samples and prices***

**STYLE #2—AERO-MESH**

*New LOW . . . LOW priced quality stainless-steel container with plastic basket weave protector.*

- Wide choice of colors
- Foolproof—cannot spray accidentally!
- Ready to use—nothing to remove
- Refillable container

***You'll be amazed at the price!!***

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***Sales offices in all major cities throughout the world***

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## DIETHYLTOLUAMIDE

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Cowles DETAMIDE 95 is superior in color, odor characteristics, and stability. No unpleasant odor . . . water white . . . and stays that way. We guarantee a minimum 95% meta-isomer content — the isomer that has the **most repellency!**

Cowles has the capacity to supply your needs immediately and steadily. Write for technical data and prices on your letterhead.

Sold in 5-gallon or 55-gallon drums.

*1885 — 75th Anniversary — 1960*

*Cowles* CHEMICAL COMPANY

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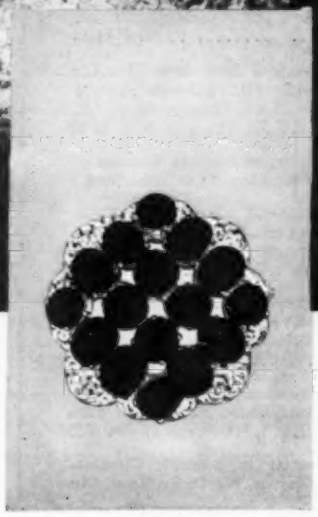

# *Why every facet of a Norda Fragrance sparkles true to Nature*

Odor "gems" Norda creates capture all that Nature intended—reflect the master-touch Norda experts have with the world's best raw materials.

So, naturally, Norda scents give you the full, deep glow of perfection for products people take to. Which "gem" can Norda make for you?

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## INDUSTRY MEETING CALENDAR

**National Packaging Exhibition, Convention Hall, Atlantic City, N. J.. .....April 4-8**

**American Chemical Society, national meeting, Statler-Hilton, Sheraton-Cleveland Hotel, and Cleveland Auditorium.....April 5-14**

**Society of Cosmetic Chemists, New York Chapter, Hotel New Yorker, New York .....April 20**

**Interpack, International Packaging Fair, Exhibition Grounds, Dusseldorf, Germany .....April 20-27**

**Federation of European Aerosol Associations, Second International Aerosol Congress, Park Hotel, Dusseldorf, Germany.....April 28**

**American Society of Perfumers, 6th annual open symposium, Essex House, New York .....April 28**

**Toilet Goods Association, scientific section, spring meeting, Waldorf-Astoria Hotel, New York, May 11.**

**Packaging and Material Handling Show, Los Angeles, Calif..... .....May 11-13**

**Chemical Specialties Manufacturers Assn., 48th mid-year meeting, The Drake Hotel, Chicago Ill..... .....May 16-18**

**Packaging Institute, Seminar on Aerosol Packaging, New York..June 1**

**Chemical Specialties Mfrs. Assn., first annual golf outing, Knollwood Country Club, White Plains, New York.....June 16**

**Toilet Goods Association, annual convention, Poland Spring House, Poland Spring, Me..... .....June 26-30**

**Chemical Exposition U.S.A., 1960, Statler-Hilton Hotel, New York City .....Sept. 3-15**

**Society of Cosmetic Chemists, annual seminar, The Drake Hotel, Chicago. .....Sept. 15-16**

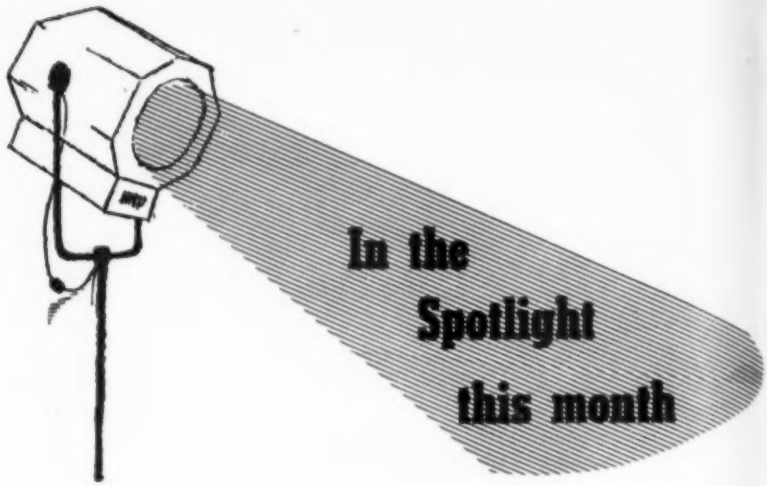
**Chemical Specialties Mfrs. Assn., Meeting of Board of Governors, Division Executive Boards, and Committees, Hotel duPont, Wilmington, Del.....Oct. 3-5**

**French Packaging Institute, First International Packaging Machinery Show, Paris, France.....Oct. 14-23**

**Canadian Manufacturers of Chemical Specialties Association, 3rd annual convention, Queen Elizabeth Hotel, Montreal....Oct. 24-26.**

**Toilet Goods Association, scientific section, fall meeting, Waldorf Astoria Hotel.....Nov. 30**

**Chemical Specialties Manufacturers Assn. 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla. .....Dec. 3-9**




- **"Qwip"—Another Success Story in Aerosol Foods . . .** How does Avoset go about the important business of sanitary filling, pasteurization of containers and valves, and label and package design? This illustrated article, beginning on page 24, gives some of the answers to these important questions for a prospective food packager.

- **The Evolution of Coated Glass Containers . . .** One company's experiences with the development of this important aerosol container, ranging from early attempts with metal and mesh covered devices, is detailed on page 26.

- **Action Plastics—Dip Tube Maker Extraordinary . . .** This new company in just a few years has captured a large share of the dip tube business. Some of the reasons are outlined in an **Aerosol Age** exclusive on page 28.

- **Public Relations—Forgotten Business Activity in the Aerosol Industry . . .** Another crack is taken at industry executives "too busy" to maintain well-rounded public relations programs. Begins on page 34.

- **Principles of Nitrogen Gassing . . .** In recognition of the important role of nitrogen as a propellant, **Aerosol Age** herewith publishes an excellent discussion on the various methods of gassing with nitrogen. Article, with diagrams, appears on page 45.

- **Report from Japan . . .** H. Iosaki, Japanese consultant, (on page 48) gives his views on new metering valves made in his country, and on the growing practice of re-using containers.

**Count On Newman-Green Valves For Finer, More Uniform, Mistier Spray Patterns**

Newman-Green's exclusive spray head design produces a uniform spray pattern that is finely atomized and evenly dispersed. The unique two-tone spray head assures quick, positive identification of the orifice opening. Direction of the spray pattern is always immediately apparent.

Newman-Green can also color-match your package. Adds to the eye-appeal of your product, whether it is hair spray, cologne, lotion or any other low-pressure formulation.

The built-in quality of Newman-Green valves attest to the thorough inspections and control methods, necessary to providing the pressurized packaging industry with the best valve obtainable. Its dependable operation sparks consumer acceptance and that's what counts! Call your nearest Newman-Green representative today for pertinent help in solving any of your aerosol packaging problems.

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Water can be your worst enemy if you produce hair lacquers, colognes, perfumes and other aerosol formulations. Moisture can hydrolyze propellants . . . promote corrosive conditions . . . upset formula balance . . . cause valve clogging . . . lose sales.

For products which must avoid water and that require the excellent solvent properties of ethyl alcohol, U.S.I. offers all specially denatured alcohol formulas in anhydrous grades. U.S.I.'s anhydrous S.D.A.-40, widely used for cosmetics and toiletries in aerosol form, has a minimum ethyl alcohol content of 99.9%.

With U.S.I. anhydrous formulas, water-insoluble ingredients won't precipitate out. Their outstanding compatibility with a wide variety of aerosol propellants and ingredients contributes to a steady spray rate . . . promotes even particle distribution. They are free from objectionable odor and low in toxicity.

U.S.I. anhydrous specially denatured alcohol formulas are delivered promptly from our nation-wide distribution points. And our Technical Service representatives are ready to help on any specific aerosol problem you may have. Write for technical data and prices.

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# There's a fast-growing market for your product...

## IN PRESSURE CANS

**To help you increase your share of this growing market, CANCO offers the broadest aerosol experience, plus the most complete line of containers in the industry!**

Last year, more than 530,000,000 pressure cans were used to package products such as shaving lather, shampoo, tooth paste, dessert topping, hair spray, hand lotion and air freshener.

That's a big market. And it's getting bigger. Now is the time for you to explore this opportunity with Canco! *Whatever you pack*—remember these important facts:

- Canco offers the largest selection of pressure cans.
- Canco pressure cans have the strongest sideseam construction made.

For more information, call your Canco salesman today.

CANCO Division AMERICAN CAN COMPANY

*New York • Chicago*
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THE BEST REASON TO TRUST PRECISION WITH YOUR PRODUCT

# *100 BILLION SUCCESSES WITH THIS VALVE

PERFORMANCE-PROVEN ON EVERY TYPE OF PRESSURIZED PRODUCT

On October 18, 1959 at 10:25 in the morning, Precision Valve Corporation produced its one billionth aerosol valve. Ten years of research, study and experience went into its creation and in those same ten years, the aerosol package came of age.

Today, almost any product that can be poured or powdered can be dispensed in an aerosol . . . always dispensed with greater ease and more convenience, usually at less cost.

Precision Valve Corporation's Research Department will be happy to help you build a better package for your product with the valve of proven quality.

**PRECISION VALVE CORPORATION**

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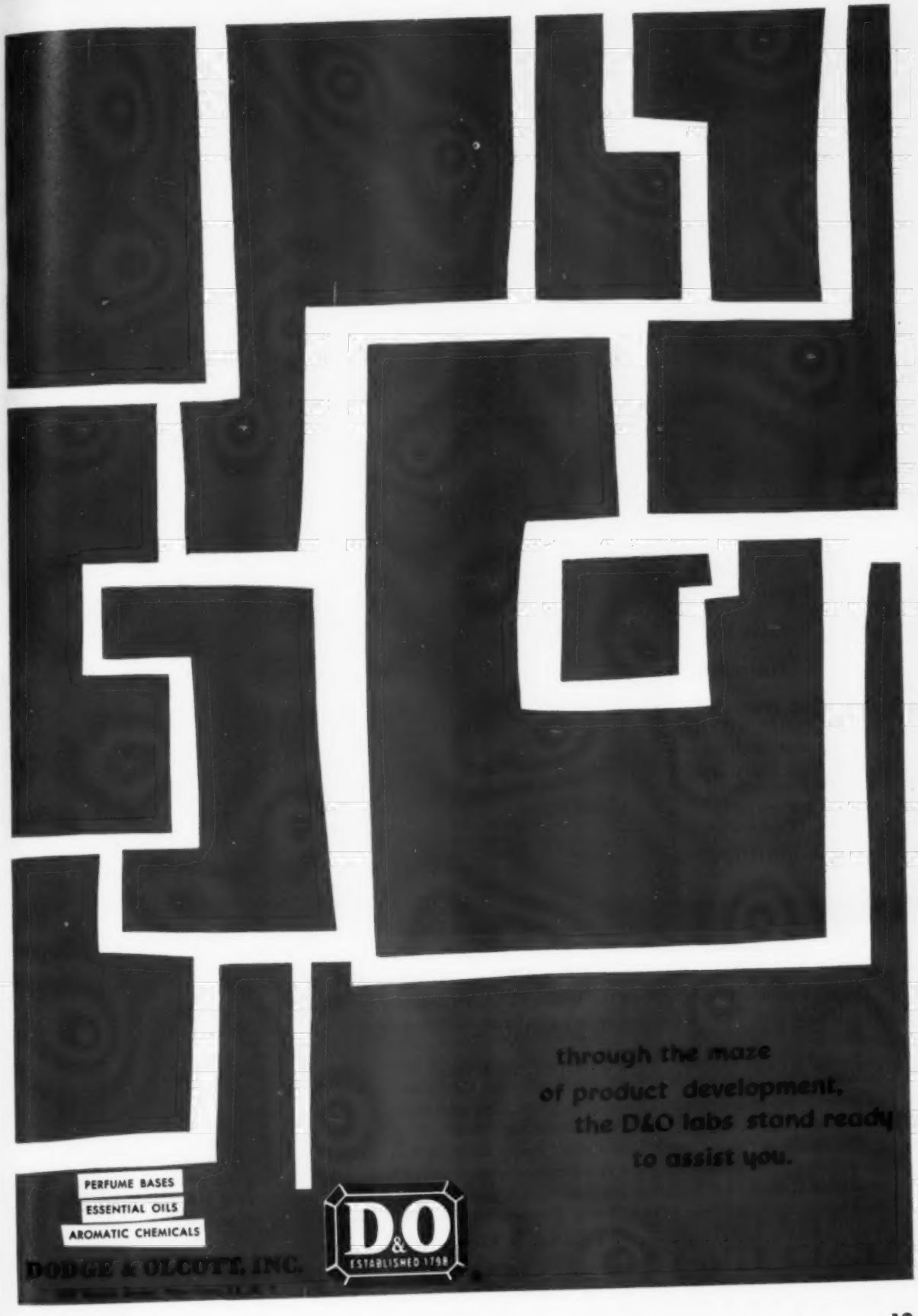
** Calculated on the basis of about 100 actuations per aerosol . . . from the 56 uses of an air sanitizer through the 198 times actuated tooth paste container, not including foreign production.*


through the maze
of product development,
the D&O labs stand ready
to assist you.
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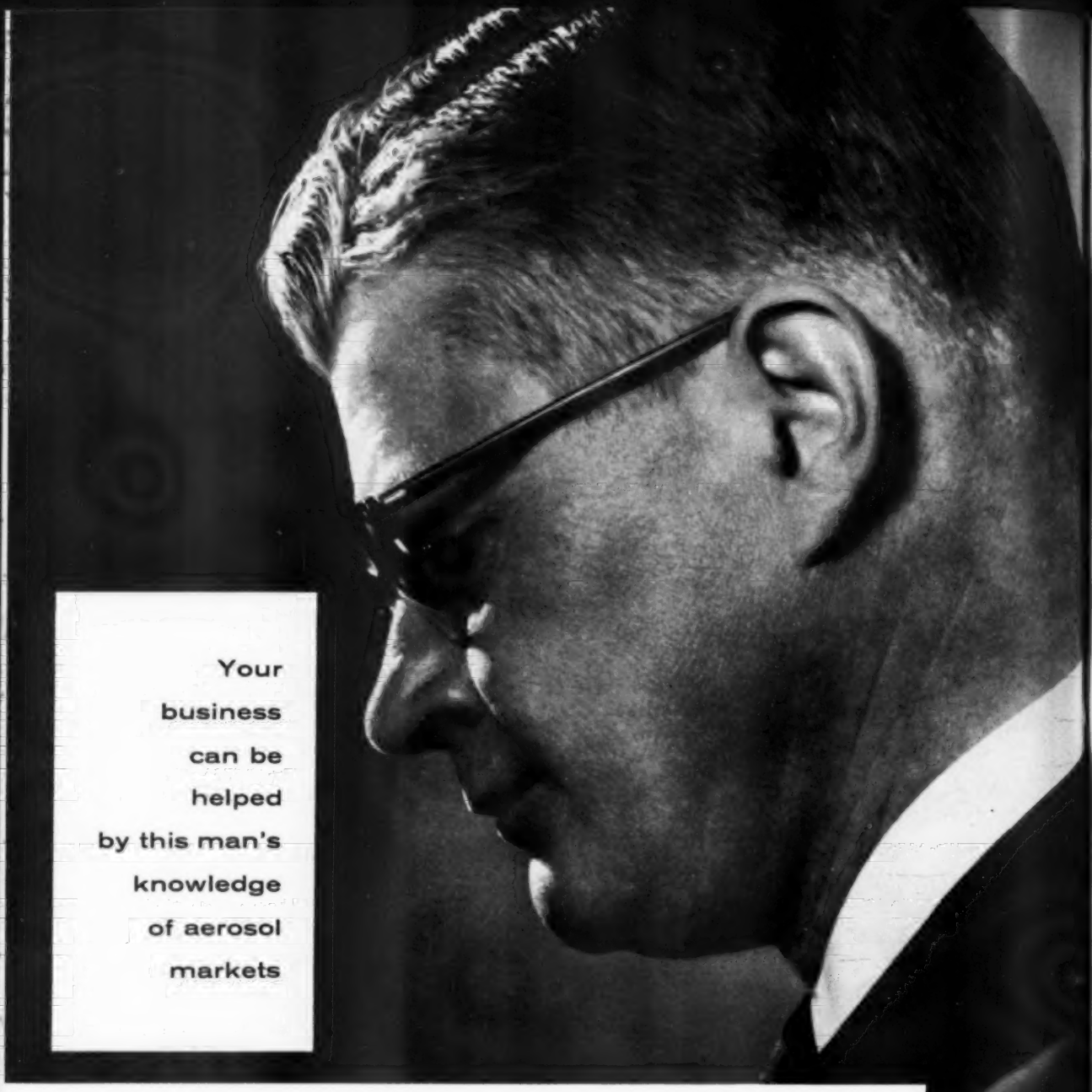


**He is Du Pont's Ralph Crane . . .** and his job is Market Research Manager of their "Freon" Products Division. From the industry's most comprehensive background of market research, his knowledge is available to help you locate marketing opportunities for your aerosol products.

Since 1947, the "Freon" Products Division has made 23 national surveys for the aerosol industry. These surveys include 17 studies of consumer knowledge, use and opinion and 6 studies of dealer practices and opinion of aerosol products. This continually growing fund of information is available to help you plan your aerosol marketing efforts.

The results of Ralph Crane's work are just one of many services available to users of Freon* propellents. The Du Pont service team includes experts in every area of aerosol planning, production and marketing. For more information call your Du Pont representative or write E. I. du Pont de Nemours & Co. (Inc.), "Freon" Products Division, 2420N-324, Wilmington 98, Del.

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Now... all fillers and distributors can have this original spray lacquer enamel formula, accepted for years as the standard of the trade and currently one of the widest used on the market! Formulated in the laboratories of the National Chemical and Plastics Co. with a background of half a century's experience in industrial coatings! Write, wire, or phone for details!

**THE NATIONAL CHEMICAL & PLASTICS COMPANY**

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# Only Gilbert makes unbreakable plastic stack caps to fit every aerosol can

**#301**
For all "211" fabricated cans

**#100**
For 6 oz. "202" Crown extruded cans

**#201**
Grips outside rim of all "202" fabricated cans; with positive snap fit for all valve styles

**#200**
For all "202" fabricated cans; cap grips valve cup

**#400**
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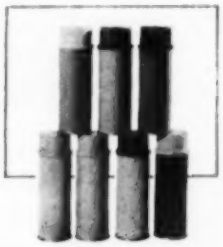
As a pioneer in plastic packaging, Gilbert Plastics has always concentrated on creating new products to meet the most advanced demands of the packaging industry. Gilbert was **first** with the unbreakable plastic stack cap . . . **first** with a complete range of plastic caps for every standard can . . . and Gilbert will continue to be **first** in plastic caps no matter what the future form of aerosol packaging. Write today for complete information, samples and prices.



**Some sales territories still available to qualified representatives.**

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# EDITORIALS

## A Bit of Discretion . . .

THE management of nearly every company which contemplates marketing an aerosol product (and often that of the company already marketing one) is beset by a curious dilemma. Almost inevitably, considerable pressure will be brought to bear on this company by two separate factions—each with a different solution to the same problem. One faction consists of contract fillers, who will seek to sell the prospective aerosol marketer their services, research and production knowledge, and use of their physical plant for a modest packaging fee. The other consists of vendors of aerosol filling equipment who —out of an equally understandable desire to expand their business—seek to induce this same marketer to immediately install his own equipment, arguing that this is the only logical way to cut costs and maintain control over product quality. The prospective aerosol marketer will likely find himself the target of such energetic sales efforts by both these factions that he may find the right decision difficult to make.

An impartial examination of the situation will reveal truths in the arguments of each faction. For instance, on the side of the equipment manufacturers is fulfillment of the traditional wish of certain food, pharmaceutical and chemical specialty firms to maintain the entire packaging operation under the company's own roof. And with some truth it has been suggested that, when any one company's aerosol volume reaches one-half to one million units per year, it is logical for the management of that company to at least begin *thinking about* buying its own aerosol line. Also, certain large-volume marketers (say, in the cologne or paint fields) may already have on hand trained technical personnel who will be able to supervise the operation of aerosol equipment with only a minimum of "extra" aerosol training.

On the side of the custom filler is the fact that his modest per-unit filling price takes into account product rejects, continuous quality control, component rejects, warehousing of components, accounting, and a score of other "hidden" costs which may later come back to haunt the do-it-yourself aerosol marketer. Moreover, in the final analysis, the most valuable asset offered by the custom filler is *experience*—the ability to turn out a quality product despite seemingly insurmountable technical difficulties, and to do it with minimum expense. This experience, coupled with the custom filler's considerable investment in equipment and professional aerosol "talent," makes his service well worth the price to the prospective aerosol marketer.

Perhaps the most likely possibility for the management of a new aerosol marketing company to become disillusioned with the whole aerosol idea is for that company to jump "prematurely" into purchasing a large aerosol production line. For without the services of a custom filler, the marketer must survive countless product development difficulties, must learn to use the equipment to its maximum capacity, must learn the intricacies of shelf-life testing,— in short, must experience each of the difficulties with production, quality control, and product research which the staff of the filler has dealt with many times over. And, in a tightly competitive marketing situation, the "sales edge" enjoyed by the marketer of the first aerosol version of a new product type may be permanently lost if introduction of the product is slowed down because of unnecessary production problems.

To all this must be added the ominous possibility that the do-it-yourself marketer may, through mere lack of experience, bring out on the market an inferior or otherwise defective product. For obvious reasons this would tend to give the whole industry a black eye, and in the long run will harm not only the equipment manufacturer who made the "premature" sale, but also the innocent custom filler who should

(*Continued on Page* 92)

# QWIP

LAST year was one of real accomplishment for the Avoset Co., Oakland, Calif., marketer of pressurized food toppings. Capped off by the winning of the Grand Award in the Aerosol Package Awards Contest of the Chemical Specialties Manufacturers Association (for its "Qwip" container with a decorative design of red strawberries), the company also was able to boast of the following "claims-to-fame":

(1) It completed its tenth year as the only company in the world which successfully packages and markets *sterilized* aerosol whipped cream.

(2) Great Britain and the Belgian Congo were among the foreign countries added to the company's list of markets. Avoset's marketing area includes all the 50 states except two.

(3) Sales volume for 1959 reached a point 11% above the figure for the previous year.

All three of these accomplishments, plus the fact that Avoset's Gustine, Calif. plant continues to be the only place in the world where cream is rendered absolutely sterile and then packaged in pre-sterilized pressure containers, have been carried out in an atmosphere almost totally devoid of public notice and fanfare, especially in the trade press.

Mahlon K. Jordan, president of the firm, explains it this way: "Frankly, we have been so busy solving the technical and design problems involved in mass-packaging of sterilized whipped cream that we haven't had much time to talk about it. This concentration on the job of production, design, and sales is paralleled by other top men in the organization: T. C. Gruhler, vice-president, sales; P. J. Bourchier, vice-president, production; and Robert Manlove, vice-president and administrative chief of staff at Avoset's Oakland headquarters.

THE keynote of Avoset's marketing operation has been flexibility. For instance, prior to the early months of 1959 "Qwip" was marketed in a can featuring dabs of whipped cream on a blue label, with just a hint of strawberries. The can was perfectly acceptable from technical and sales standpoints, but the Avoset management felt convinced that a better-designed can would increase sales.

They turned to the design department and marketing advisers of the American Can Co., all of whom confirmed that a more brilliant, lithographed label would most likely help the company. Avoset's advertising agency, Honig-Cooper and Harrington, San Francisco, provided the design answer to the problem: use of more white—to emphasize a feeling of clean sterility; more prominent use of red strawberries—for eye and taste-appeal; and more use of the available display area of the aerosol can by extending the side design upwards to cover the additional display surface on the shoulders.

Key roles were played in perfecting the label by Fred Glauser and Victor Lee, agency art executives, and Jerry Wright, who drew the finished visual. The agency personnel were guided by an enameling and engraving team from American Can. This liaison was necessary in order to render the proper degree of distortion in the artwork on the shoulders of the can, to ensure that when the lithographed metal is formed into its final shape, the art-distortion will coincide exactly with the mechanical changes in the shape of the metal (thus making the artwork seem distortionless on the completed can).

Development of the final label, as seen in the photographs on this page,

# Another Success Story in Foods

was further complicated by two additional considerations. For the important Latin American market, "Qwip's" virtues must be spelled out in Spanish. And because of seasonal requirements, the cold weather label features tasty-looking pumpkin pie garnished with the shipped topping. This "seasonalization" of the product label has been tied in with store displays at point of sale, involving placement of "Qwip" cans in close proximity to counter displays of strawberries and other items likely to be served with the topping (see illustration).

This strict attention to detail is also incorporated into the technical details of the "Qwip" package. For example, both the plastic dispenser spout and the metal valve are Avoset developments, both dictated by the fact that the product is sterilized and must be packaged in cans and components which also must be sterilized by extreme heat. Also, the control, or dispensing mechanism must prevent any bacterial contaminants from entering during storage or while the container is being used.

These problems were in part solved by development of a plastic dispensing spout incorporating a valve pin, which activates the valve when the flexible dispenser tube is pushed out of vertical by finger pressure. As is evident, this is a basically different concept from the standard spring-operated valve found on most aerosol products.

Mechanically "swedged" into the top of the can, the valve both controls the outgoing cream and provides a self-sealing feature to prevent entry of contaminants. This stainless steel mechanism, subjected to sterilization procedures which Avoset shrouds in secrecy, is manufactured entirely within the company's plant at Gustine, and is inserted in the cans in the restricted packaging room. The latter, incidentally, may be entered only by a handful of masked, white-gowned technicians. So exclusive is the room, in fact, that since no foreign objects may be brought in, what few photographs have been taken are taken from outside, through shatter-proof glass windows.

To insure that any leakage will be outward, and not inward, the air in the packaging room is under positive pressure. The air itself is filtered and sterilized. Irradiation is applied from overhead ultra-violet installations which direct bactericidal rays upon cans, components, and person-

(*Continued on Page* 92)

Typical of Avoset's merchandising technique is this combined "Qwip" — strawberry display which has the effect of inducing the purchaser to buy both berries *and* whipped cream.

Lithography on the "Qwip" cans, done at the Oakland, Calif. plant of American Can Co., is examined by Fred Glauser, art director of Avoset's advertising agency, and A. W. Woy, Canco Western area engraving and enameling supervisor.

Evolution of the coated glass pressure package is demonstrated by, left to right: the uncoated, heavy-weight glass container, the metal shield, paper shell, plastic coated fiber, (plastic has been peeled away to show woven fiber), unbonded plastic bottle, and most recent type of package.

LAST month was something of a milestone in the history of plastic-coated glass aerosol containers. After scoring numerous marketing successes in the cosmetics and toiletries field, and with strong indications of future successes with pharmaceuticals, household products, and other specialized uses, one of the first food products in a coated glass container was placed on the consumer market.

Called "Taste Tap Spray 'O Garlic," the product was introduced in early March by Gard Pressure Foods Corp., Northfield, Ill. As may be seen from the name, it is a garlic food seasoning which Gard officials report imparts the true flavor and zest of garlic without the troublesome mess —and without leaving a garlic afterbreath. (See front cover)

According to the manufacturer, the new spray puts the "white tie" on garlic, dresses it up in an attractive push-button cruet, and brings it to the dining table where it can be used to season salads and other dishes. It also makes possible a host of new uses such as a spray for hot buttered baked potatoes, with main course dishes, for dips and spreads, and in soups, sauces, and gravies.

The white plastic-coated bottle, which holds three ounces of product, bears an attractive silk screen label in russet brown and uses reverse lettering to advantage. Label for the product, which is currently being distributed in 27 marketing areas, announced that the product "Leaves you breathless!"

The container used for "Taste Tap Spray 'O Garlic" is especially noteworthy in that such containers are the product of some 12 years of intensive research by Owens-Illinois researchers. This particular plastic-coated glass bottle, introduced by Owens-Illinois in the fall of 1958, probably represents the peak of a new manufacturing process which apparently meets all present requirements for this type of convenience packaging.

*By W. M. Robertson*
Sales Manager, Drug & Chemical Industries
Owens-Illinois Glass Co.
Toledo, O.

RESEARCH on pressure packages made of glass began at Owens-Illinois back in 1946, when officials of Bridgeport Brass came to Toledo to discuss plans to develop a consumer package from which the product could be dispensed through use of liquefied propellants.

During World War II Bridgeport was one of the largest loaders of pressure-packaged insecticides, which came to be widely used by the armed forces in fighting mosquitoes and other insects. After the war, Bridgeport Brass turned its attention to the American consumer market.

Naturally enough, in aiming for the consumer market, prime consideration was given to toiletry and cosmetic items. But it was quickly realized that the question of compatibility was going to be a major factor in marketing a successful product. There were just too many toiletry and cosmetic products not compatible with metal containers.

Therefore Bridgeport Brass turned to Owens-Illinois for aid in developing a glass container for this specific purpose. The first such container was an uncoated, heavy-weight, glass package with principal concentration of glass at the heel.

# The Evolution of Coated Glass Aerosols

A group of stock designs in various capacities offered by Owens-Illinois in connection with its recent introduction of new improved plastic-coated glass pressure packages is shown in this photograph.

The research staffs of Owens-Illinois and Bridgeport Brass concluded that, if a glass container was to be used under such pressures as were developed by liquefied propellants, the glass container would either have to be protected by a metal casing or tightly encased in some very tough paper, similar to the winding on a shot-gun shell, or with a plastic coating.

As will be seen by the photographs, our experiments included development of various protective features. However, for practical reasons, none was considered to be the final solution.

The best solution finally settled on was a plastic coating. Up until 1956, exhaustive research work was done with an unbonded plastic coating; and although still not the final solution, it led us to a process of fully bonding the plastic coating. This met all the requirements considered essential by our management.

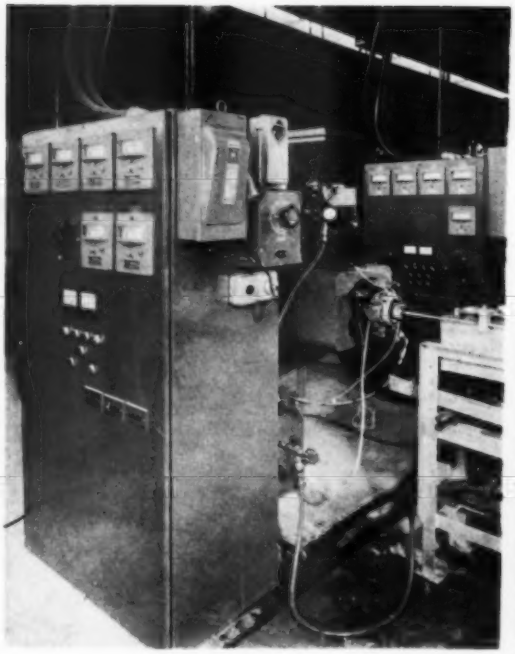
Currently being produced at the Owens-Illinois plant at Fairmont, W. Va., the containers are actually finished by a process by which the plastic is bonded to the glass as part of the container itself. It can't peel off.

Some of the advantages claimed for the Owens-Illinois glass pressure package are the natural inertness of the glass (which largely eliminates formulation-container compatibility problems); wide flexibility of shape and design; elimination of metal parts in contact with the product; and an aesthetic appeal which gives the container social acceptability on either dressing room table or dining room table—depending on the product.

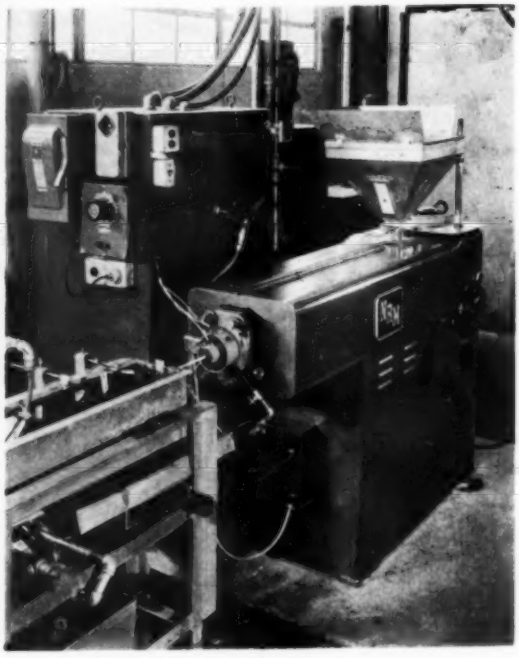
The plastic-coated container has a uniform coating which offers neat appearance, insures high lustre, contributes to uniform color, and offers greater color stability. The surface has a grease-free feeling, and close tolerances (due to a more consistent fit of the puck) materially aid the filler in crimping the valve.

As will be readily seen in the photographs, such packages can be decorated with nearly any design for lasting, eye-catching product identification. The variety of shapes and sizes tends to give a brand "family" identification for instant recognition.

Once again in the aerosol industry, user-supplier cooperation, coupled with thorough research, has set a pattern for a promising future.★



This view of the extrusion units shows the electronic "monitor" (at left) which closely controls temperature by means of the four gauges arrayed along the top.



A view from the other direction shows the extruded dip tubing emerging from the unit (in the center foreground). Hopper at top is used to feed "raw" plastic.

INSTANT success in the aerosol industry has become so commonplace that of itself it no longer rates a story. However, the fact that, in just two and a half years, one manufacturer of dip tubing, Action Plastics Co. (a subsidiary of Colorite Plastics of New Jersey, Inc.) Paterson, N. J., has been able to capture a major share of the aerosol dip tube business is indeed impressive.

Since the aerosol dip tube is probably the least appreciated component in the pressurized package, Action's steadily rising share of the dip tube market has gone virtually unnoticed—except of course by the valve manufacturers, who have the closest working relationship with the producers of such materials. However, apace with Action's rising sales curve has been a growth in technical knowledge, product development abilities, and manufacturing know-how — all of which have contributed substantially to the sales curve.

The parent company, Colorite Plastics, was begun as a small plastics extrusion operation just 12 years ago. Prime product of the company is standard plastic and nylon-reinforced garden hose, which is currently being turned out at the almost fantastic rate of something in the vicinity of 30,000 feet per hour. Naturally, Colorite's manufacturing and distribution systems are geared to consumer rather than industrial production.

About three years ago Colorite took a long look at the market for industrial extrusions—including the lusty, growing aerosol industry — and decided that its experience with extrusion of hose might give it a good foothold in the industrial field.

At that time Peter Sechel joined the company. With his technical know-how and organizational ability, within six months he had established Action as a formidable contender for the aerosol business. Since that time he has become a full partner and president of Colorite's industrial extrusion subsidiary, and the company has considerably widened the scope of its products to a point where now over 250 different items are produced. In addition to aerosol dip tubing (and similar tubing for lotion pumps and atomizers), Action currently produces a wide range of extrusions — all the way from underground conduit sleeving to ball point pen barrels, from special gaskets for window panels to plastic tires and rocket components.

ALTHOUGH dip tubing is relatively simple looking in appearance, much "hidden" research and technical knowledge goes into its production—and like any other aerosol component is in fact a *precision-*

# Action Plastics

## dip tube maker extraordinary . . .

built product. It is produced from virgin plastic materials by hot extrusion through a standard plastics extrusion unit. Close tolerances are maintained for all dimensions.

The nearest thing to an "all purpose" dip tube material is stress-crack resistant formulated polyethylene, which has been used on the majority of aerosol valves for the past ten years. Standard polyethylene is still used in valves in which the dip tubing is inserted *into* the nipple. However, in the aerosol valve where it must be stretched over the nipple (as is the case for the large percentage of valves), standard polyethylene tends to crack in the presence of aromatics, alcohols, solvents, and other ingredient components. For its stress-crack resistant formulation, Action mixes in small amounts of other thermoplastics to give the material added resilience and stretchability.

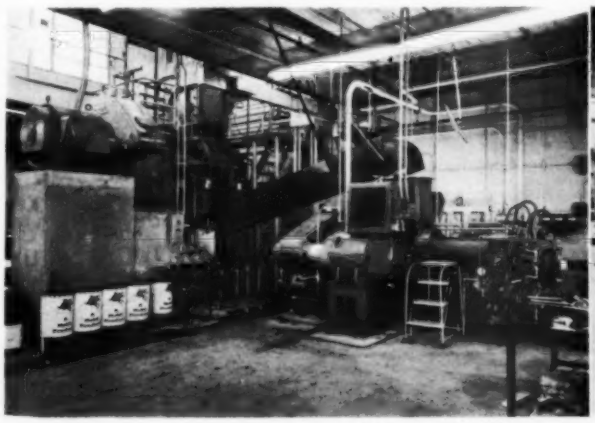
Action is currently in the process of converting its dip tube production to another formulation of even better chemical resistance. Called "NSC-11," the new tubing is made of a high molecular weight polymer which demonstrates less swell in certain product formulations and generally better stress-crack resistance. Price, always an essential consideration in the valve business, will not be a factor in the substitution of the better tubing since it is just as cheap as standard polyethylene.

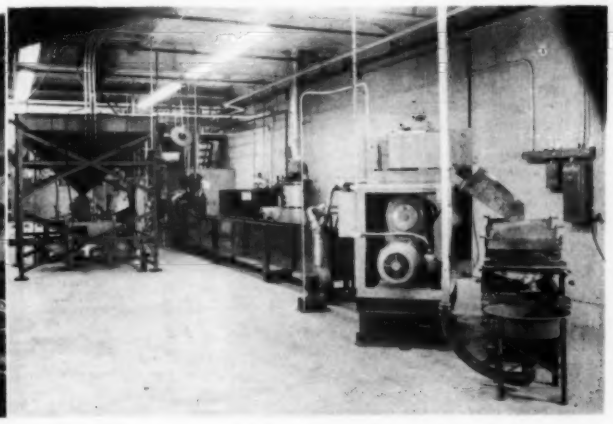
Besides the standard polyethylene and the new "NSC-11," Action's tubing for aerosols includes: "NSC-3," a heat sterilizable stress-crack resistant polyethylene especially suited for food aerosols; Nylon, which has found extensive use in aerosol coffee and fire extinguishers; "PP-1," a polypropylene tubing for actuator extensions; and "T-76," a vinyl tubing for medicinal aerosols currently used for force-feeding of livestock. This wide range of materials can be ordered in 25 different sizes (wall thickness in relation to interior circumference). Usually shipped on disposable cardboard shipping spools, it also is sold in pre-cut lengths with pinked, diagonally-cut, and other unusual ends.

One unique Action development is a small orifice restrictor, which is placed in the valve nipple or dip tubing to better control the flow of ingredient. Such orifice restrictors are essential in several of the metering valves currently in use for perfumes, pharmaceuticals, and foods.

Ever since the development of automatic valve assembly units several years ago, dip tubing is usually ordered in the 2,500 foot spool. However, with a view toward expediting shipment and handling within the

This two-story compounding unit, which may also be used to reclaim scrap plastic, is one of the showpieces of the Action-Colorite operation. Two photographs below illustrate tremendous size of the unit, which is fully automatic and electronically controlled.





Peter Sechel

valve plant, Action engineers are developing a special automatic unwinding machine which could handle 5,000 foot spools. Current plans are to lease the machines to the valve companies so they could convert their equipment without changing present design.

The manufacturing operation is done in a large area of Action's plant. The "raw" plastic is received in bags or barrels from the primary producer and first is mixed in a huge two-story-high automatic compounder (see photo). This unit can either pre-mix virgin materials, or can be used to reclaim plastic scrap for future use in such non-aerosol items as garden hose and wire conduit.

The actual extrusion equipment looks and works something like a huge sausage machine. The powdered or pelletized plastic is poured into a bin at the top, from which it is gravity fed into the heating elements of the machine. There it is moved through four heating stages before being forced through a machined die to form a continuous tube. This entire heat extrusion process, which is completely automated, is governed by an electronic monitor (see photo) which keeps the molten plastic at a prescribed temperature (400°) until the time it emerges as tubing. Each of the four temperature gauges on the monitor is automatically compensating, which means it triggers off the heating mechanism each time one of the four stages falls below the prescribed temperature. The developed pressure and speed of the machine is also automatically regulated.

The water trough extends nearly 50 feet from the extrusion unit (rear background).

After emerging from the extrusion unit the now fully formed dip tubing is submerged in a long tank of cool water. Then it is dried and picked up by a "take-off" unit which gently draws it from the water trough. The tension with which this automatic unit operates is a highly critical factor, since if it pulled too hard it might distort the cooling tube, or if it allowed too much slack it might conveivably snarl the new tubing in the water trough. From the "take-off" unit the tubing moves to an automatic winder, which measures and winds the tubing onto the disposable cardboard spools.

At the winder samples are taken and each is measured with a caliper-like device for wall thickness (the sample is cut and four separate measurements are made) and for interior diameter. Tolerances of plus or minus .0015 inches are maintained on all tubing.

The company's aerosol business is so good that it is currently shipping leased trailer-trucks of dip tubing to Chicago area valve manufacturers. The extrusion equipment is running three shifts per day, and trucks and trains are used to service Eastern and other Midwestern customers.

One essential part of Action's customer service is laboratory testing of dip tubing in strong solutions to determine its resistance to chemical attack. Laboratory samples are kept in glass containers filled with alcohol, Igepal, household detergent, silicones, methylene chloride, methyl styrene, chlorothene, and other aerosol ingredients or especially active reagents and solvents. Besides the obvious value of such tests to control quality, this type of test provides the company with a means of checking the efficiency of the extrusion process and the quality of the raw material made by the company's basic suppliers. The laboratory is part of Colorite-Action's new 13,000 square-foot building expansion. Total plant area now includes 42,000 square feet of manufacturing, office, laboratory, and warehouse space.

As if the full-time full-capacity production weren't enough evidence of how successful Action has been in its aerosol activities, further evidence is available in the fact that the company is currently shipping "NSC-11" tubing to the subsidiaries and licensees of U. S. valve companies in France, Germany, and Britain—in spite of the obvious fact that all these countries have significant plastic industries of their own.★

## *Spontaneous Purchases Show Big Rise*

COMPLETELY unplanned, "spontaneous" purchases are taking an increasingly larger role in today's supermarket shopping, according to a new survey of consumer buying habits released recently by DuPont. Among total buying decisions made in the store, these unplanned purchases now account for 73.3%. In 1954, they were 67.6% and ten years ago represented less than 60% of all store decisions.

Although it did not include specific category questions for aerosol products, this report is of some value to aerosol marketers in its general findings about the large increase in spontaneous purchasing of all supermarket items. Spontaneous or impulse sales are believed to account for a good number of aerosol sales in supermarkets.

Called the "Sixth DuPont Consumer Buying Habits Study," the new report indicated that, of the entire number of items that end up in the family market basket, resulting from both home and store decisions, unplanned purchases now

(*Continued on Page* 89)

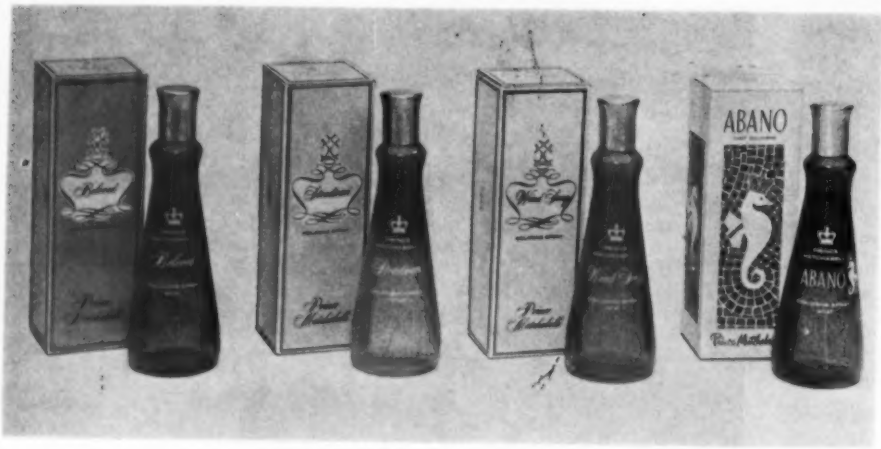
**Dermomixin** is a new Italian pharmaceutical product introduced by Pierrel, S.p.A. for topical application. Bottles are made by Bormioli in Parma and glass bottle valves and filling were by Solfrene, S.p.A., Milan, Risdon licensee.

**Target**, 2, 4-D weed killer in an aerosol can, is a new product of DeMert & Dougherty, Inc., Chicago, now being distributed nationally at a retail price of 98 cents. 16-ounce can may be used for about 2000 weed killing applications. It is said to work against dandelion, plantain, ragweed, wild onion, poison ivy, and other weeds.

**Shocking Eau de Parfum Mist** is a new product of Schiaparelli, New York. Retailing at $3.75 (plus tax) it uses uncoated glass bottle.

# NEW PRODUCTS AND PACKAGES

**Hypnotique** and **Primitif** have been marketed by May Factor & Co., Hollywood in three-ounce cologne bottles, each retailing for $3 plus tax. Dram-size perfume bottle is included on collar.




Four of its colognes, **Beloved, Stradivari, Wind Song,** and **Abano,** have been introduced in new packages by Prince Matchabelli, Inc., New York. 3.5-ounce bottles will retail for $3.75 plus tax. Each bottle is distinctively colored and highlighted with luminescent flecks. Bottle is made by Wheaton and valve by VCA.

Skin divers will be able to use new **Swim Safe** shark repellent developed by Par Industries, Los Angeles. Six-ounce Crown container is equipped with Precision valve. Product is said to work mainly by smell as it is sprayed at shark.

What is probably the first multiple-actuator package has been introduced by Aerosol Corp. of South, Arlington, Tenn. for its **Fashionette** hair spray and **Finishing Touch** hair conditioner. Three actuators are offered for different types of hair. Continental Can utilizes Newman-Green valve and actuators and Walter Frank cap. "Genetron" is the propellant.

**Silikone** is a moisture repellant to eliminate breakdown and increase efficiency of electronic parts and equipment. Ed-Berl Products, Inc., Baldwin, L.I., is the marketer. Crown container is topped by a Precision valve.

# Interpack, National Pkg. Show, FEA Meeting, Make April Key Month for Industry

TWO of the world's largest industry exhibitions, the National Packaging Exposition, in Atlantic City, N. J.; and Interpack, the International Packaging Exhibition in Dusseldorf, Germany; this month will vie for the attentions of aerosol marketers and suppliers all over the world. The National Packaging Exhibition, scheduled for Atlantic City's Convention Hall, April 4-7, will include exhibits of aerosol filling and container handling equipment, components, and raw materials. Interpack (as outlined in the second story on this page) will feature exhibits by Europe's leading aerosol suppliers.

The Atlantic City show will feature at least three aerosol lines in operation, plus aerosol component and product demonstrations. ★

IN ADDITION to being Europe's largest international packaging exhibition, this year the Interpack Fair—to be held in Dusseldorf, Germany, April 20-27—will be the scene of the annual meetings of the Federation of European Aerosol Associations (FEA) and the International Aerosol Association. These meetings will be held April 27-28, the last day of the fair and the day following.

The Federation of European Aerosol Associations is the international group representing the members of the European aerosol trade associations organized on national levels in Germany, France, Finland, and Switzerland, plus those from countries which have not yet formed national associations. Thus, aerosol interests in Great Britain, Italy, Sweden, Austria, as well as those in South America and other overseas countries, are all represented by the IAA. This year the German Aerosol Association (called the Interessen-Gemeinschaft Aerosole, the "IGA") plays host to the Dusseldorf meeting.

Interpack began just four years ago as a fair for the confectionery packaging industry, on a more or less strictly German basis. However, the first exhibitors ranged so far outside the confectionery field that the second of the biennial fairs in 1958 became known as the International Packaging Exhibition and Display of Confectionery Machinery. Perhaps the largest of its kind in the world, the fair at Dusseldorf covers all types of packaging machinery and components for all types of products. Hence, its interest for the international aerosol industry. The exhibition also plays host to the annual congress of the European Packaging Federation.

The 1960 Interpack will have exhibition stand space of nearly one-half million square feet, just about double that of the 1958 fair. Of the 390 exhibitors that have booked space (it has been sold out since November), 130 come from countries outside of Germany, with quite a few from the U. S.

Europe's leading suppliers of aerosol loading machines and packaging components are among the exhibitors. Precision Valve International, for instance, will offer an eye-catching exhibit offering visitors an opportunity to measure actual knockdown for various insect types. Druk-Pak, Aeratom, and Solfrene will show new aerosol equipment, and Farbwerke Hoechst and Von Heyden will show products using their propellants. Schmalbach, Germany's largest supplier of cans, will exhibit aerosol containers. ★

### *Second International Aerosol Congress of the Federation of European Aerosol Associations*

**Wednesday, April 27**

11:00 a.m. Cocktails at Park Hotel, Dusseldorf, for all members and guests of FEA (at the invitation of Farbwerke Hoechst and J. A. Schmalbach Blechwarenfabrik).
2:30 p.m. FEA Chemical-Technical Committee Meeting.
4:00 p.m. Committee Meeting of FEA Delegates.
8:15 p.m. Dinner and Dancing — Park Hotel.

**Thursday, April 28**

9:30 a.m. Aerosol Congress.
1. Address of welcome by director of IGA and opening of Congress by FEA president.
2. *Laws and Regulations on the Aerosol Package in Different Countries*, by A. Herzka, Pressurized Packaging Consultants Ltd., London (in German).
3. Sound Film on Aerosols in English, German, and French, by Farbewerke Hoechst.
4. *The Aerosol Glass Bottle—Synthesis of a Technical Discussion Between Manufacturer and Consumer*, by a French speaker to be announced.
5. *Compatibility Tests for Cosmetic and Pharmaceutical Aerosols*, by Dr. K. Otto Jacobi, Colmar Research Center, Wiesbaden-Igstadt, Germany (in German).

4:00 p.m. General Meeting of IAA.
5:30 p.m. Separate Meetings of IAA Executive Committee and IAA Technical Committee.

# Public Relations

## . . . forgotten requirement of the aerosol business

DESPITE the efforts of this and other magazines to correct the situation, public relations efforts at the company level in the aerosol industry continue to be far below the efforts of older, more mature industries. With the possible exception of the propellant and container suppliers, at least two of the valve makers, a number of major marketers, and no more than half dozen custom fillers, public relations efforts by suppliers, fillers, and marketers leave much to be desired in nearly every phase of what is now termed, in business terminology, "formal" public relations.

As was pointed out in a previous *Aerosol Age* article ("Public Relations for the Aerosol Executive," April, 1958), this weakness applies particularly to the small filler, the small marketer, or the smaller supplier of components or equipment, who, "because of real or imagined limitation in time, staff, experience, or necessary financial outlay—tends to take little advantage of even the most modest public relations effort." Although this might be termed a catchall generalization, possibly not especially valid in the case of an aerosol company management which doesn't have the physical staff to provide for such nebulous company activities, it does point up one inescapable fact: *The role of public relations is still not appreciated by a major segment of the aerosol industry.*

Or, to state the problem in another way: The previously held (and seemingly logical) idea that lack of knowledge of *how to go about* public relations was the major stumbling block seems to be no longer valid. With the exception of good public relations efforts by those few companies mentioned in the first paragraph, public relations — on either a consumer or trade level—is too often placed far back on the shelf as either being a too expensive luxury (in either time or money) or a business activity which traditionally rates far behind other less essential undertakings. In fact, it would be a legitimate observation for a good number of aerosol companies that less is spent on public relations than is spent on window cleaning, office stationery, and other minor-expenditure business outlays.

Varied conjectures have been made in the industry (by the Publicity Committee of the CSMA, for instance) about why this fundamental weakness should prevail in aerosol business philosophy. It has been suggested that the aerosol executive has usually emerged from a career as a chemist, engineer, cosmetic, or insecticide technician, and very often has had to learn company level administration by trial and error. Public relations, being especially difficult

# Today's loveliest container . . .

## *a seamless Peerasol**

Women love this compact, lightweight aerosol. Fashioned in one piece from gleaming aluminum, Peerasol containers can be handsomely decorated in two, three or four colors over a base coat. Precise valve-cup fit is obtained by a patented process in manufacture. This means leak-proof containers, higher pressures and a high standard of quality control.

Peerasol is the smart container for perfumes, colognes, drug or pharmaceutical products. Write or call for complete information.

*PEERASOL is a tradename of the Peerless Tube Company for this one-piece, seamless aerosol with the patented lip for tight valve-cup fit.

**PEERLESS TUBE COMPANY,** Bloomfield, New Jersey

to measure in terms of success, is one field which the aerosol executive has never been *obliged* to get into — and his business has often prospered in spite of this. It is also suggested that most of the smaller aerosol firms operate with an executive staff of from two to five individuals, and that after production, sales, distribution, research, and quality control responsibilities are delegated, no effort is made to delegate authority for advertising, public relations, and other seemingly less productive activities.

This philosophy of: "If we've been successful without it, why worry about not having it" is obviously a head-in-the-sand attitude which by no stretch of the imagination can be judged a sound one. When a given company reaches a certain corporate size, public relations must become essential in winning increased sales volume and in keeping that company ahead of its competitors. A good public relations program can also serve to *return* information to the company from which the public relations emanates, and its value toward building an established corporate image can be substantial.

Salesmen for suppliers of aerosol components and raw materials have an easier job if their companies have good public relations programs.

Looking at the whole situation from the narrow prominence of the *receiving* end of public relations, this important business activity should never be neglected until a company should reach some arbitrary level of financial success. For the company to think in such terms legislates against its *ever* having a sound company-oriented public relations program. This generality does not, of course, preclude the possibility of working efficiently and well through an outside public relations or advertising-public relations firm. But it does introduce the danger that, once a public relations counselor *is* engaged, he won't be given enough information to initiate and carry through the type of public relations program for which his organization is geared. A seasoned philosophy about keeping the consumer and trade press fully informed, it is therefore evident, must be "bred into" the company structure at a time when everyone in top management will have a chance to absorb the benefits of a good orientation in public relations.

Of all the many "publics," the aerosol executive must try to cultivate through his public relations, probably the most essential are (1) current and prospective customers, (2) suppliers, (3) creditors, (4) stockholders (if any), and (5) the general public. The prime instruments available are the trade and local press — and radio, television, etc., if they can be cultivated — and such specialized media as stockholder reports, company bulletins, etc. Since in most instances the last two of these will have to be done with the assistance of either an advertising agency or an experienced printer, the rest of this article will logically devote itself to the general and trade press.

At the outset it should be stated categorically that legitimate company news *will* be published, if it is timely and properly presented to a specific editorial target. For the aerosol company without the services of a public relations counselor, the prime instrument of dispensing news will be the standard press release—actually often nothing more than a piece of the company stationery on which the news item is typed.

Trade magazine editors always keep a weather eye out for legitimate news, and every news release is read carefully to evaluate it for use. The release should be kept as short as possible, and superfluous (or even complimentary) adjectives should be avoided. If an announcement is being made of the appointment of a new company officer, the whole life history of the individual isn't necessary. The essential details should be given first, so that if "cutting" is necessary it won't be important material which is left out. One common rule of thumb is to try to hold the length of the news release to a single page—except, of course, in the event of a major news story.

Names of individuals not connected with the news items should not ordinarily be included, i.e., "John Doe, vice president in charge of research for the ABC Aerosol Co., announces the appointment of" . . . This form of announcement is unnecessary and will probably be cut out by the editor anyway—if he is worth his salt. Such announcements *are* of some value in the case of important changes in company policy, or major technical developments, in which the name of an individual tends to give the story added veracity. But for ordinary every-day news releases, their annoyance quotient to the editor may in some marginal cases markedly reduce the chances of the item being published at all.

If available, photographs can add measurably to the news release. They should be professional-looking, clear, and identified carefully. And captions

SCENTS
POLAK'S RUTAL WORKS INC. MIDDLETOWN, N.Y.
AMERSFOORT HOLLAND · PARIS FRANCE · BREMEN GERMANY · BRUSSELS BELGIUM · SOFLOR LTD PERIVALE ENGLAND

*Task-Designed* Crown aerosol cans contain the help for many a minor cut, scratch and scrape! And a whole new market arrived, thanks to aerosol cans that have been specially Task-Designed by Crown to package a wide variety of products. Aerosol-packed spray bandage is just one of hundreds of new products that gain consumer interest from Crown's pioneering, skill, wide experience and Task-Designing in this new field. May we have the opportunity to provide you with more details?

CROWN

*for cans · crowns · closures · machinery*

**CROWN CORK & SEAL CO., INC., 9300 Ashton Rd., Philadelphia 36, Pa.**

should be attached naming people, products, or plant equipment.

What subjects can make news for the aerosol company? Here is a partial list of some of the things which may warrant a news release:

1. Products
   - new products
   - unusual product uses
   - prizes for products
   - redesigned package, or trademark
   - new components.
2. Manufacturing
   - new methods or processes
   - new product ingredients
   - new safety device in the aerosol plant
   - research findings for product or process development
   - new production facilities
3. Company Organization
   - new personnel appointments
   - reorganization or stock issues
   - sales promotion programs
   - new plant or plant additions
   - company policy on a controversial subject
   - anniversaries of long-term employees
   - visits by famous people or groups
   - changes in employee benefits
   - changes in marketing practices
4. Research
   - process or method discoveries
   - quality control procedures developed
   - new equipment
5. Sales and Promotion
   - new product introduction
   - new distributors or dealers
   - trends in sales
   - new areas of distribution
   - trade show displays
   - contests, premiums
   - new company symbol
   - new advertising schedules (in national media)
6. Miscellaneous
   - employee awards
   - safety records
   - unusual accomplishments by employees
   - company policy on major local development
   - local election to office of company official
   - retirements, birth, deaths (of employees)
   - projected company plans

By no means can this list be interpreted as a tabulation of story ideas which *will* be accepted by a trade or general press editor. In nearly every case it will depend on the policy of the medium on such stories, the space available, the timeliness of the story, the relative importance (in the estimation of the editor) to his readership, and a number of minute considerations which can be attributed to the "human factor." But all of these ideas will have merit under the right circumstances, and some (new personnel appointments, new product developments, new methods or processes, for instance) will be accepted in almost any given situation.

Speaking exclusively of the trade

(*Continued on Page* 96)

## *Drug Firm Loses Fair Trade Test in Supreme Court*

A CASE with serious implications for future efforts to put through fair trade legislation last month went against Parke, Davis & Co. The U. S. Supreme Court, in a ruling handed down Feb. 29, sharply restricted the manufacturer's right to fix the retail price of his product and then enforce that price.

By a vote of 6 to 3, the high court held that Parke, Davis violated the Sherman Antitrust Act in its 1956 attempt to maintain fixed retail prices for its drugs in Richmond, Va., and the District of Columbia. In a move to reduce price-cutting by some drugstores in those cities, Parke, Davis threatened to refuse to deal with those drug stores which cut prices, and also warned wholesalers that *their* supplies would be cut off if they continued to deal with the offending retailers. When some of the druggists refused to go along with the fixed prices, they found themselves unable to get Parke, Davis supplies.

These moves apparently proved ineffectual, for later Parke, Davis tried to get the cut-rate druggists to discontinue advertising the drugs at the discount prices, even though continuing to sell them at those levels. This attempt lasted a month, at which time the Justice Dept. began looking into the matter.

The new Supreme Court ruling, in effect, changed a doctrine first established in 1919 in the case of the United States vs. Colgate. This decision said that the Sherman Antitrust Act permitted manufacturers to choose their customers, and implied that it was legal for a company to unilaterally announce retail prices and then refuse to sell to dealers who would not abide by them. However, the 1919 case did not mention contracts or agreements between manufacturers and wholesalers or retailers to maintain resale prices. However, legislation to permit such resale price maintenance, by agreement wherever legal under fair trade laws, was later enacted by Congress.

The Parke, Davis attempt at price fixing took place in areas where there was no fair trade legislation (16 states have held fair trade laws to be invalid and the District of Columbia never had such a law). Consequently the Feb. 29 decision by the Supreme Court could put an end to any unilateral action by manufacturers to fix prices in these non-fair trade areas.

In his majority opinion, Justice Brennan charged that Parke, Davis had gone beyond the mere announcement of prices and "simple refusal to deal." The company, he said, had employed *other* means to effect adherence to resale prices. The Colgate 1919 case, he pointed out, does not imply that the Government must prove an actual agreement to fix prices to show a Sherman act violation. Pressures of various kinds by the manufacturer against the retailer would remove the case from the Colgate exemption.

"If a manufacturer is unwilling to rely on individual self-interest to bring about general voluntary acquiescence in his prices, and takes affirmative action to achieve uniform adherence by inducing each customer to adhere to avoid such price competition, the customers' acquiescence is not then a matter of free choice prompted alone by the desirability of the product."

Despite the fact that Senate and House backers have apparently given up efforts to put through a Federal fair trade bill in this session of Congress, this decision (coupled with recent Senate investigation of drug price fixing) is expected to deal a serious double-blow to any chance of future fair trade legislation.★

# New Developments in Aerosol Paints

*By Peter W. Sherwood*
Research Engineer
White Plains, N. Y.

SEEMINGLY overnight, aerosol formulations have become the fastest growing segment of the paint industry. A recent estimate places U. S. sales in 1960 at 80 million cans, or $111 million at retail price, and forecasts the 1963 output will be well above 105 million cans.

Although first introduced commercially in 1948, almost the entire growth in aerosol paint sales has taken place in the years since 1955, when annual sales were no more than nine million cans( less than one-tenth present production). Since 1955, three factors have combined to cause the sudden upsurge in the market: improved aerosol paint valves have become commercially available; major formulation and propellant-product compatibility problems have been satisfactorily solved; and the consumer public has become increasingly aware of the convenience of using aerosol-packaged formulations for painting small objects and areas not readily accessible to the brush.

Coincident with the sudden rise in aerosol sales since 1955, has been the entry into the field of several major producers (Sherwin-Williams and Glidden in 1956, DuPont in 1957). Naturally, for companies with the tremendous volume of these, aerosols still represent only a small part of total paint sales. For such specialty companies as Krylon, Sheffield Bronze Paint, and Plasti-Kote, however, the picture is somewhat different, because for these companies aerosol coatings constitute better than 50% of total sales volume.

All told, about one-third of America's leading paint formulators currently have a stake in the aerosol market. And although coatings sold in this form constitute only about 3% (4 million gallons in 1960) of total

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## with MM&R Fragrances

Let MM&R put a powerful urge to buy in your aerosols. MM&R perfume oils overcome even the heaviest odors of basic chemicals and impart a refreshing, sales-stimulating fragrance to your products, at low cost.

New MM&R perfume oils are being created constantly to keep abreast with rapid advancements in the aerosol field and to meet the special requirements of our customers.

MM&R's cumulative knowledge and experience, gained during more than sixty-three years in the development of perfume oils — over fifteen in connection with aerosols — are at your service in increasing the salability of your products.

Write now for complete information.

**MAGNUS, MABEE & REYNARD, INC.**

*The World's Most Famous Supplier of Essential Oils, Concentrated Flavors and Basic Perfume Oils*

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paint sales, their share of the market is rapidly increasing. Indications are that nearly the entire demand for half-pint cans, and perhaps 50% of the demand for one-pint containers, will eventually be captured by aerosol-packaged paints.

Such success breeds heightened competition, and price is becoming a paramount consideration in future marketing plans. Several trends can be discerned in the aerosol paint field, most of them directly attributable to competitive pressures. Most important among these trends are: use of lower-cost propellants, new progress toward development of water-based formulations, and a tendency among larger marketers to install their own aerosol filling facilities (at present, most still rely on custom fillers for their aerosol work).

One further response to competitive pressure is the growing awareness of a need to upgrade the quality of the product. In this area, two main lines of approach are taken: (1) changes in formulation which will reduce space now taken up by propellant (presently 35 to 55% of container volume) to permit a corresponding increase in useful paint volume per can; and (2) improvements in paint formulation and valve design to reduce valve clogging and overspraying. Along with these major objectives the manufacturer can hope to achieve secondary advantages, including reduction in sagging, running, and blushing of the paint, faults which can be frequently ascribed to the diluent effect of high propellant content.

In nearly every aerosol coating on the market, fluorinated hydrocarbons serve as the propellant. Their well-known advantages include: suitable vapor pressure characteristics, stability, low corrosivity, non-flammability. Against this may be rated the drawbacks of high cost, low compatibility with a number of paint formulations, and the need to use relatively large propellant-to-paint ratios (with a consequent reduction in product volume for the customer).

The search for new propellants in aerosol paints has taken two main lines: adoption of liquefied petroleum gases (propane and butane), and the use of compressed gases (notably nitrogen and carbon dioxide). These alternate propellants are available at substantially lower cost — the price per pound of LP gas being about one-fifth that of fluorinated hydrocarbons, and the cost of nitrogen and carbon dioxide being essentially negligible in the usual commercial breakdown of aerosol packaging charges. However, both these types of gases introduce distinct new problems, with aerosol paints, which are only now being resolved.

For the LP gases the immediate and most pressing disadvantage is high flammability, a fact that has not prevented their widespread use in Europe for a number of commercial aerosol product types. In the U.S. applicable regulations and some critical safety considerations have so far largely restricted the use of such gases to a few product types. However, the problem is being overcome and one major producer of surface coatings is said to be converting his aerosol line to LP propellants.

One approach to the flammability problem is to employ these gases as a solution in such chlorinated solvents as methylene chloride and 1,1,1-trichloroethane (which are used in fluorinated hydrocarbon propellant-systems to reduce vapor pressure and to save costs by "stretching" the propellant). It should perhaps be pointed out here that the chief drawback of such an approach (with LP gases) is that they tend to compound the problem of developing a fully compatible paint formulation, since their use often makes it necessary to revise the formula from the ground up.

It may be argued with some logic that the same need for complete reformulation arises *whenever* a new propellant type is employed. However, the extent of change for LP gases is less pronounced, particularly since complete replacement of fluorinated hydrocarbons by LP gases is not considered practical. The extent of substitution per package usually ranges between 15 and 25%.

The flammability of LP gas demands far greater precautions in the installation of filling equipment. All electric facilities must be explosion-proof and an adequate ventilation system must be provided. Furthermore, it is impractical to employ refrigeration to liquefy propane-butane at near-atmospheric pressures during the filling operation, and propellant is thus always charged by the pressure method (which is generally less suitable for achieving high production speeds).

Probably even more practical than LP gases for paint aerosols is the use of nitrogen and carbon dioxide as the pressurizing agent. Neither gas, of course, is liquefied prior to charging the aerosol container. As the contents of the can are released, the gas pressure decreases, and almost inevitably a point is reached where a suitable spray can no longer be maintained. This causes a waste of some percentage of the ingredients.

This shortcoming could conceivably be overcome by use of a paint formulation in which the propellant would be soluble. For instance, this requirement is met by a water-based paint in which carbon dioxide is dissolved under pressure (such as is done in soda drinks). Such a solution would be released from the aerosol can at a fairly constant pressure. Actually, the amount of dissolved gas is relatively small and cannot be counted on to create sufficient atomization by itself—though the problem can be solved by use of a mechanical break-up tip in the release valve. The small amount of propellant called for in this system provides (aside from the cost saving in propellant) the essential feature of offering the buyer that *much more* product per aerosol can. Thus a special incentive is provided for the development of water-based paints for aerosol application.

Other major benefits offered by compressed gas propellants include the ease with which they may be employed in charging the can, the previously-mentioned low cost, and

(*Continued on Page* 95)

## Plastic-coated glass makes the ideal pressure package

## Only Owens-Illinois pressure packages have this bond of plastic to glass

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Our staff will gladly recommend, adapt or custom-tailor a fragrance that will give your aerosol insecticides a fresh, distinctive appeal in this fast-growing, highly competitive market.

**GIVAUDAN-DELAWANNA, INC.**

Principles of

# Nitrogen Gassing

*By William Grant DeGray*
President
DeGray Design, Inc.
West Palm Beach, Fla.

NITROGEN as a propellant for pressurized packaging is achieving increased attention in the aerosol industry. It is a highly satisfactory propellant in many products, including those of food and drug varieties. Especially advantageous for reasons of economy, nitrogen will most likely continue to find new applications in the pressurized packaging field.

Methods of filling aerosol containers with nitrogen are numerous, such systems usually being directly dependent upon the type of product and production requirements. The object of this article is to comment on some of the opinions and experiences of the writer on vapor-phase gassing. No consideration is given here to the gas absorption by the product, solubility, compatibility of product and propellant, and/or other chemical relationships.

### Filling by Equilibrium

In order to attain a definite volume of gas at a predetermined pressure within a container, it is normal to attach the container to a gas source system set at the predetermined pressure, and open the system to and into the container. Within a period of time, the pressure within the container will equal that of the source system. That is to say, the gas pressure within the container and the gas pressure within the source system become equal, or can be said to have reached an equilibrium. It is of course necessary to consider working pressures of the container as recommended by the container manufacturer and the ICC codes, as well as to calculate the required volume necessary to dispense the product.

According to Boyle's Law, gas pressure and volume are inversely proportional. This means that the pressure times the volume of a gas is constant, so long as the temperature remains constant. It has been the experience of the writer that a container head space of about 30%, at a pressure of 90 psi for a product with a viscosity approximating 2 centipoises, is a reasonably good set of conditions from which a practical laboratory analysis can be made. Equilibrium filling usually employs a gas cylinder with a pressure regulator, preferably two-stage, a high pressure line, and an appropriate valve to connect to the container being filled (Figure 1). By using the two-stage nitrogen regulator, the operator is able to see the pressure and volume remaining in the tank on the high pressure gauge, and adjust the line pressure to the required gauge setting on the low pressure gauge.

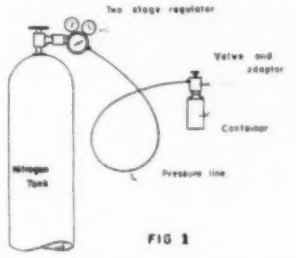

FIG 1

When the system is connected up to the container and the valve actuated, the gas is discharged into the container. When the valve is first opened, it will be noted that there is a pressure drop indicated by the needle of the low pressure gauge. The pressure indicator falls away and immediately starts back up. As the indicator approaches the initial setting, the flow of gas slows down until the pressure within the container is equal to the gas pressure in the system. (Nitrogen is unlike propane, butane, the fluorinated hydrocarbons, and some of the other gases commonly employed as aerosol propellants, since it is not used in the liquid state.)

Many conditions are significant in the speed of such gassing, i.e., line diameters and lengths, types of valve and gauge orifices and restrictions, temperatures, speed of valve actuation and control, etc. However, the major governing conditions are the volume required and the pressure differential between the source system and the container. Oftentimes the container is subjected to a vacuum prior to gassing, which evacuates the atmosphere (oxygen) and *increases the pressure differential.* Without vacuum the container would contain approximately 1 atmosphere (14.7 psi). If the gauge or line pressure is established at 100 psi, the differential would be 100 psi. (the gauge also being subjected to atmospheric pressure).

When the filling valve is actuated, the initial flow of gas is at its greatest velocity because of the greatest pres-

sure differential. As the pressure within the container increases, the pressure differential decreases, and the time necessary to establish equilibrium becomes proportionately greater.

Figure 2 is a chart established from an experiment using a group of standard six-ounce (14.44 cu. in. volume) containers, empty, with crimped-in Precision valve #NN filling line, regulators, and nitrogen tank as illustrated in Figure 1, and the gauge pressure established at 100 psi.

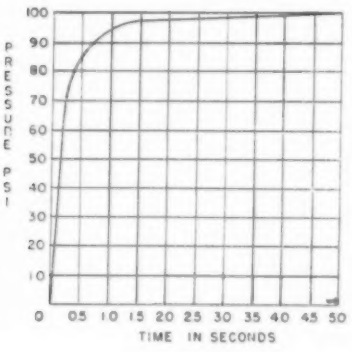


FIG. 2

From the graph (Figure 2), it may be noted that, with the conditions used in the experiment, the total filling time approximates five seconds from the time the filling valve is actuated until the time equilibrium is established. Holding the system open for a longer period will not overload the container beyond the setting of the regulator. It should also be noted that the container is 75% filled in a little over 25 seconds. As the differential decreases, the remainder of the fill takes increasingly more time until equilibrium is attained (taking the maximum volume at 100 psi) and requiring the full 5 seconds.

Since the pressure within the container will never exceed the setting as determined by the regulated line pressure, it is an obvious conclusion that overcharging would be rare and possible only with faulty equipment. As a further conclusion it may be said that a manually-operated apparatus can be employed in the simplest form as illustrated in Figure 1. It may also be adapted to most any type system from controlled manual to completely automated systems, the only limitations being production requirements and economics.

## Pressure Clipping

For lack of better expression, "pressure clipping" was coined by the writer to describe the gassing process as described hereinafter.

Observing the graph, Figure 2, it is noted that the flow of gas is *quite rapid* during the first one-quarter second of filling and gradually slows down until the greater part of the filling time is required to bring up the last few pounds of pressure. Therefore if the regulator pressure were increased by 15 pounds and the last four seconds of the operation eliminated, the pressure required within the container can easily be attained in well under one second. The undelivered remainder of the adjusted pressure is "clipped off" by a timing mechanism. As a consequence, the time necessary to fill the container is reduced by as much as 90%. A production system was built under these conditions with a required container pressure of 90 psi, using the same basic apparatus with the addition of timing mechanisms and a gauge setting of 115 psi, with results as illustrated in Figure 3.

A production system was built to satisfy the conditions as follows:

1. Product is a residual spray insecticide.
2. Propellant is nitrogen at 90 psi.
3. Propellant volume 30% headspace, 16-ounce container.

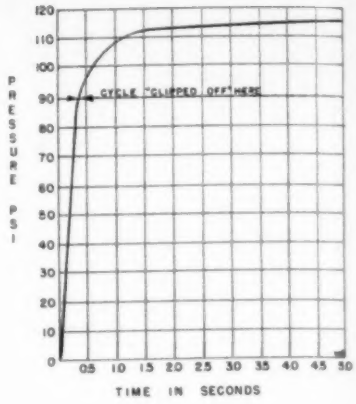


FIG. 3

4. Gassing time 0.5 seconds.
5. Completely automatic; container indexed into apparatus, gassed, and removed mechanically, automatic controls.

The results of the system have been highly satisfactory. The basic apparatus employed is essentially the same as that used in equilibrium filling, with of course the addition of accurate time and motion controls. Figure 3 is a graph indicating the increase in efficiency by clipping the pressure where indicated by the arrows. Gas cost for nitrogen filling the first 100,000 containers was less than $100, or a gas cost per unit of $0.001.

Although many variations of this system are possible, we felt that hydraulic power was the most desirable because of the smooth operation, uniform power, and accurate control of the synchronized motions. As the indexing unit is timed to deliver one

(*Continued on Page* 91)

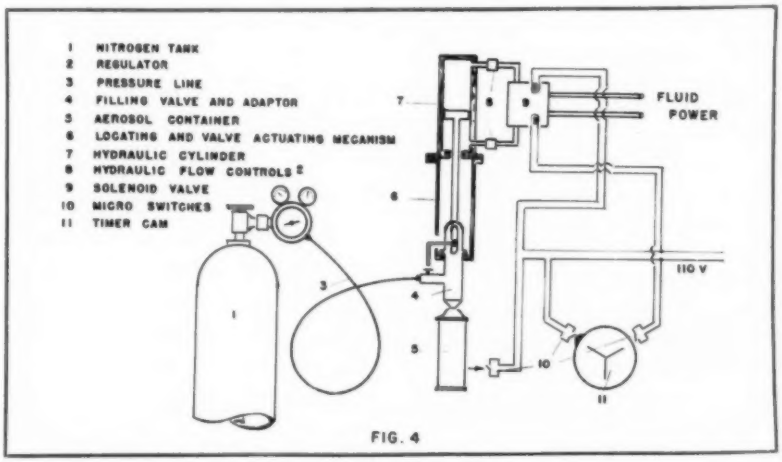


FIG. 4

NEW FROM CONTINENTAL:

# Major step forward in Pressure cans

**Continental perfects "PRESSURE TAB" side seam with improved soldering method. New can permits higher pressure than any other 3-piece aerosol.**

Continental's improved aerosol can represents a major step forward in this rapidly expanding industry. Here is an aerosol container that *really* takes pressure—more than any other 3-piece can being manufactured. The can's unique pressure tab side seam, together with Continental's improved soldering method, form greater bond stability—and that means higher pressures than ever before possible.

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Cuban Office: Apartado 1709, Havana, Cuba

Report from Japan

# Re-use of Containers, New Metering Devices, Highlight Developments in Japanese Industry

THE aerosol industry in Japan has made great strides in recent years. New product activity includes development of several pharmaceutical and food products, plus stepped-up marketing of improved hair lacquers and insecticides.

Among the especially promising new products is aerosol toothpaste. Nitrous oxide, a propellant relatively new in Japan, is the propellant for these toothpastes, mainly, of course, because of its relatively low price in comparison with the fluorinated hydrocarbons. Fluorinated hydrocarbons still cost about 60 cents per pound, whereas liquefied petroleum propellants are only about 10 cents. This price differential has resulted in the fact that about 90% of the aerosol manufacturers in Japan use at least a percentage of liquefied petroleum gases as propellants.

*By H. Iosaki*
Aerosol Chemical Research Co.
Kobe, Japan

Although there are only two producers of LP propellants in Japan, the quantity produced fulfill demand adequately and the quality is quite good. As to solubility and odor, there is not very much difference from other propellants. The major problem continues to be the danger of fire, but research has shown successfully how to at least reduce this danger.

One approach, used with success for hair sprays, has been to use methyl alcohol, which is now permitted in Japan. 30% water is mixed in the methyl alcohol; and, by a special method which does not cause it to become milky, shellacs, aromatics, and a stabilizing agent are then added. To this concoction dry ice is added and the product is cooled down to —10°C. Filling and crimping have to be done promptly. 25 to 30 grams of propellant (10% propane, 90% butane) are used in a 12-ounce aerosol can to bring the pressure to 45 psig at 30°C. Frame testing of the finished package revealed that a little carbon dioxide is dissolved in the product, and the water in the formulation renders the delivered product non-flammable. The volume of spray delivered is 0.6 grams per second.

The cost of hair lacquer last year was about 70 cents per can, but with cheaper propellants it has been reduced to 30 cents. This has resulted in a sharp increase in quantity sold, and possibly a growing interest in other aerosol product types.

THIS rise in product sales has brought with it advances in valve research, which immediately have resulted in the introduction of some excellent Japanese-made valves. Metering valves have been significantly improved, and their use is becoming more widespread.

Presently, there are two companies in Japan which specialize in valve manufacture. This column will confine its remarks to the valve produced by Maruichi Valve Co.

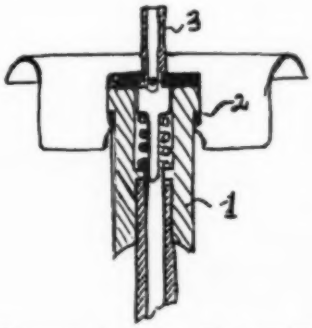


Diagram 1 shows this particular valve, which is relatively low in price

KP

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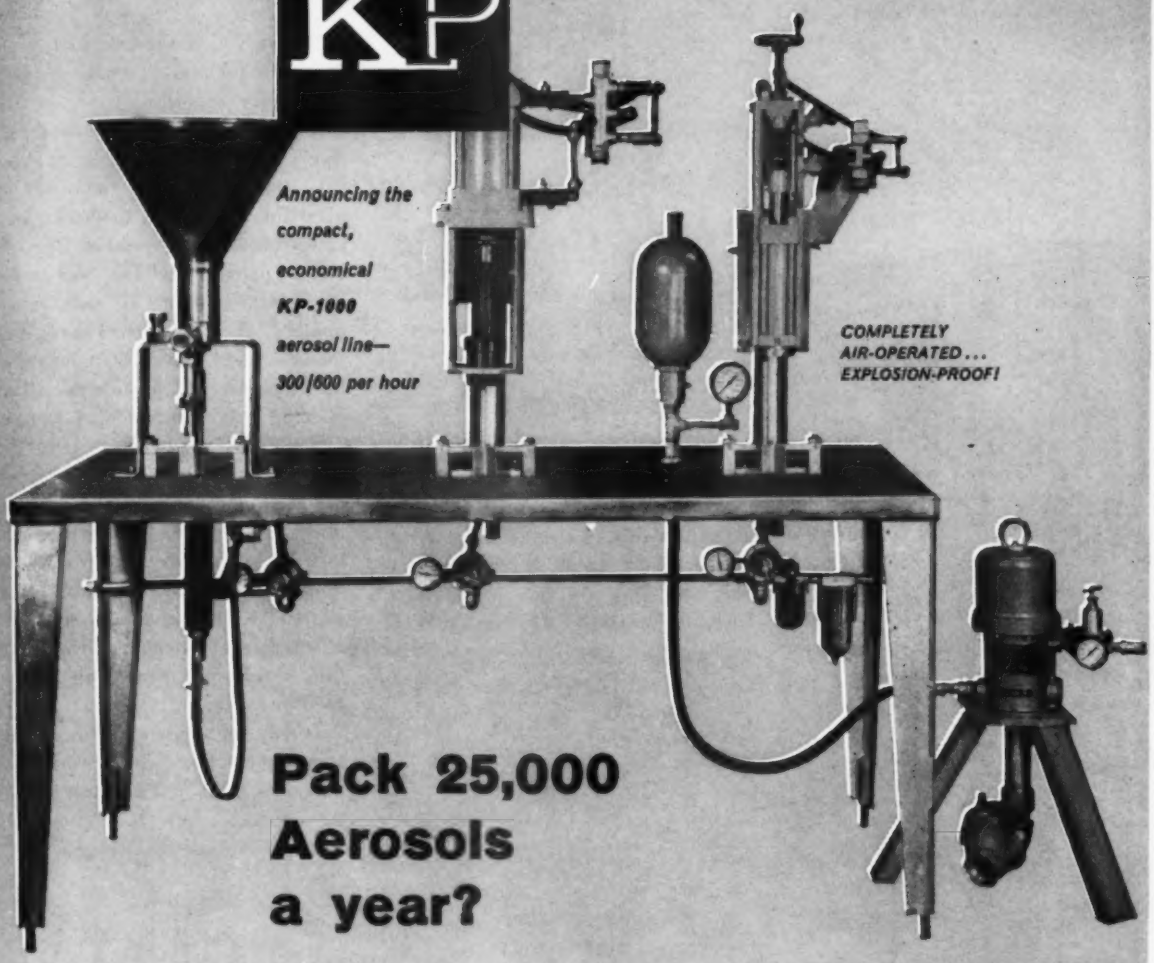
*COMPLETELY AIR-OPERATED... EXPLOSION-PROOF!*



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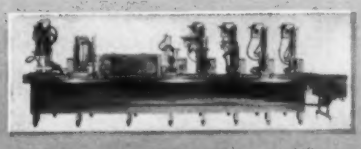


**NEW "800" LINE,** the automatic single straight line. Also available as double track line for larger volume. Completely engineered throughout.

and trouble-free. Special attention should be given to the washer (2) inserted under the cup (1), as well as to construction of the center piece (3).

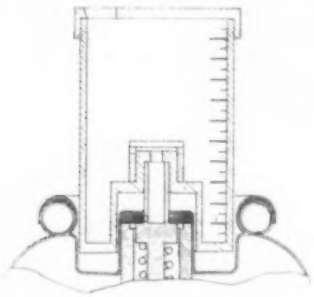


Diagram No. 2

Diagram 2 shows a simple valve with a measuring cup instead of a push button. This valve has proven useful in the case of certain pharmaceuticals, where the requirement is for the spraying of a fixed quantity of product. Of course, this cup may be replaced by a conventional actuator.

Diagram No. 3

In diagram 3, by turning the actuator to right or left, the active ingredient is stirred by a propeller (1) and (2) attached to the dip tube. Sometimes a thin washer is inserted over the packing (4) (5) and it can be geared in, as in the case of diagrams 1 and 2. (6) is a filter screen not used for a high viscosity product. A freely adjustable metering valve, utilizing construction of a revolving center piece (4), is also available.

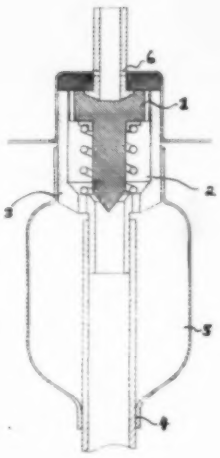



Diagram No. 4

An application for a patent for the valve, shown in diagram 4, was made to the Japanese government in 1957. This particular valve is a metering device which employs an auxiliary bag. (2) and (3) are the passages from the auxiliary bag and (5) is the dip tube. Though diagram 5 has an auxiliary bag, as does diagram 4, this valve operates in the upside down position.

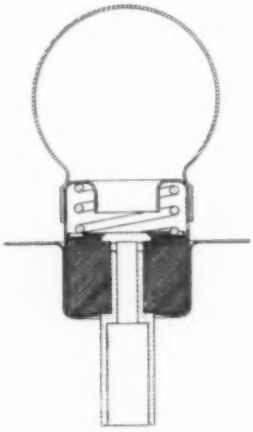


Diagram No. 5

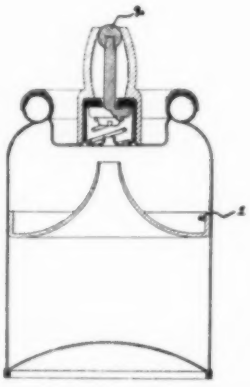



Diagram No. 6

Diagram 6 shows a valve designed especially for high viscosity products. This valve was illustrated on page 77 of the June, 1959 issue of *Aerosol Age* (under the heading U. S. Patent No. 2,831,808). This valve was applied for in a patent to the Japanese Government in November 22, 1952 and the patent (No. 9752) was granted the following year. To date quite a number of these valves have been manufactured and used in Japan, but the structure of the unit is so complicated that a number of technical difficulties have lately restricted its use. Moreover, as the pressure type is preferred (to the tilt type) in Japan, only one or two loaders are now using this type of valve. In this writer's opinion, this valve is only an improved "K-38" valve, and as there is no Japanese patent application for this, exactly the same unit is being used in Japan.

It may yet be premature to say anything conclusive about metering valves in Japan, but a simple explanation of how the leading ones work may prove somewhat helpful.

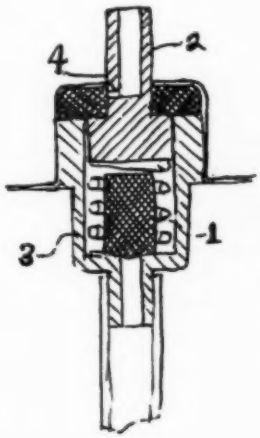
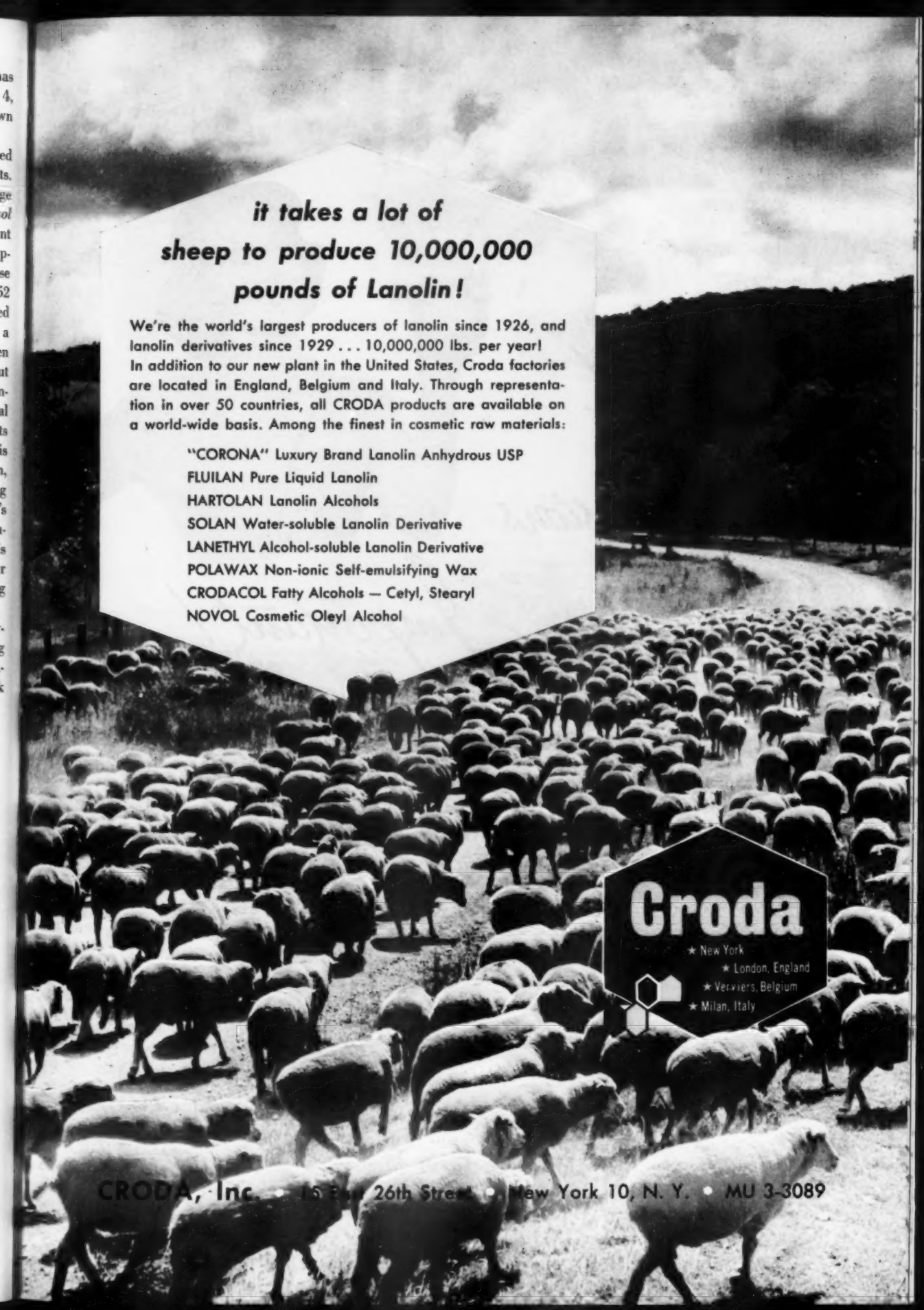



Diagram A

The device in diagram A has proven quite popular because of its relatively simple construction, low cost, and trouble-free operation. By inserting the spring part (1) of the brass coated center piece (2) the actuation of the push button causes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the spring to press closely to the bottom of the cup (3), thus permitting spraying through orifice (4).

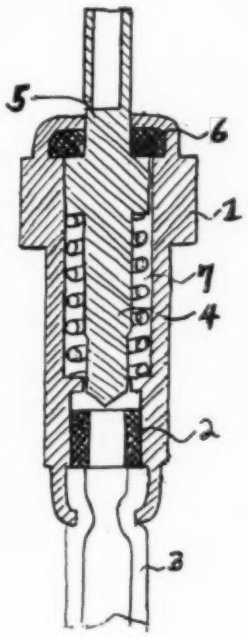


Diagram B

Diagram B shows a metering valve in which a rubber gasket (2) is inserted onto the lower part of the aluminum body (1), and the dip tube (3) is attached from the outside. When the button is pressed downwards, the lower part of the center piece (4) and the rubber gasket (2) are brought closely together — thus opening the orifice (5). The volume of the spray can be changed by the chamber (7).

Diagram C is a valve, manufactured by Aerosol Chemical Co., which works by elapsed time, a concept which is borrowed from that used in elaborate fish nets and for many other purposes. Leaking from the rubber plate (5) is prevented by putting it at the lower part of the body of the valve (3) and the sleeve (6) is attached by a screw (2) at the top. The rubber gasket (7) is attached tightly to a rubber sheet (11) by means of a semi-circular fitting (5). If necessary, many holes can be made on the cap (2) to meet the requirement, and polyethylene can be used for the cap material. If a protuberance is attached to the lower part (12) of the valve body, a hole will be made on the mounting cup when the valve is crimped. Thus one valve can be used on a number of cans. Effectiveness of the active ingredient is the most important point, and it has been used successfully for a fish attractant.

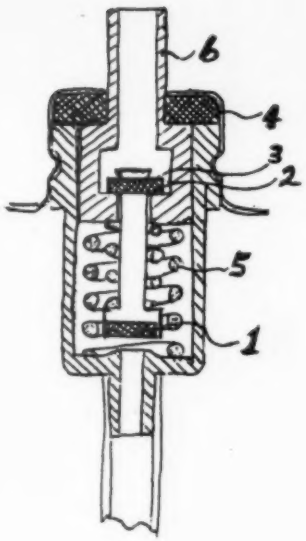


Diagram C

Ordinarily there are two orifices (4) but this number can be increased (depending on product requirements) if necessary. Such a device might well prove useful for household and garden insecticides. For such products it will function properly if an absorbent bit of cotton soaked with water, or a cup-formed paper or other material filled with water, is attached to the upper part of the body (3). Under ordinary circumstances, powdered sugar is put into (8), but cube sugar may also be used.

In addition to these valves, there are five or six types of special valves used on a portable gas cooker now being widely marketed in Japan. A 12-ounce can of butane is being sold for picnics and mountaineering (hiking) purposes, and one can will give about six hours of service.

All these valves are made in Japan on semi-automatic production lines. As labor costs are considerably lower than those in the U. S., prices of these valves are approximately 30 to 40% lower than corresponding U. S.-made valves. The maximum percentage of valves with which trouble may be encountered is at present about 1 to 1.5%.

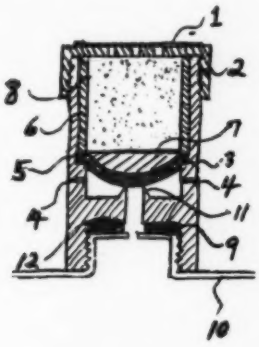


Diagram D

Along with improvements in valve design, there also has been marked improvement in container design and availability. Cans of 16, 18 and 22-ounces are on the market, as are 5 cc. containers in both glass and aluminum. Without exception the glass bottles are vinyl coated, some being transparent and others colored. Perfume packed in a 5 cc. bottle employs a metering valve which will spray about 350 times. A package, in a beautiful box, costs only 60 cents.

Since aerosols are still comparatively new in Japan, during the last year hair lacquers and insecticide packages employing *reclaimed* containers have begun to appear. There is no regulation in Japan which prohibits this, so it could continue. As may be imagined, reloading of reclaimed containers means none or little cost for new valves or containers, and hair lacquer sold in such containers has retailed for as little as 12 and 18 cents per can.

Such loading is being done in two ways. One is by making a small hole in the side of the container, injecting the product into it, and then welding up the hole by heat. The final operation is charging by pressure through the valve. The other method involves the filling of the product through the valve by means of an anti-pressure glass cylinder. Propellant is filled in from another valve and product and

(*Continued on Page* 95)

# The magic touch of aerosol packaging

Practically every time you enter a drug store nowadays, more and more aerosol packaged drug and cosmetic products appear on the shelves and counters. Not just new products. But well known, established brands as well. And with good reason! For these products are "better" in aerosol form. They're easier to use and more acceptable. They generate more sales and yield a higher margin of profit.

### The booming aerosol drug market

For the second year in a row, pharmaceuticals were the fastest growing of all aerosol groups—showing a sales increase of 50% in 1958 over 1957, compared to a 20% increase for all aerosols. And the market is still growing fast for a host of aerosol pharmaceuticals, such as external analgesics, spray-on bandages, athlete's foot medication and nasal sprays. It is expected that aerosol drug sales will reach $200 million by 1961!

### Tremendous growth of aerosol cosmetics

Aerosol packaging has a magic touch in helping to sell products for women. Hair sprays are the largest selling single aerosol product group—115 million units in 1958*. Aerosol colognes and perfumes have proved phenomenal sellers—shooting up from 5.4 million units as recently as 1955 to 28 million units in 1958*. Aerosol hand lotions and creams are showing a similar increase, as are aerosol personal deodorants.

### ✓ How to "enter" the profitable aerosol field

If *your* product can be sprayed, brushed on, daubed, poured or dusted—you, too, may be able to share in the spectacular success of aerosol packaged products. Here's how General Chemical, one of America's leading producers of aerosol propellants, can help you enter the profitable aerosol field:

**Market information**—Helpful facts and figures on the aerosol market for many types of drug and

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**New product ideas**—The results of continuing research into new and improved aerosols—including information about promising new aerosol formulations developed in our "Genetron" aerosol propellant laboratories—are available in "Genetron" aerosol propellant Product Information Bulletins covering many types of aerosol products. Write for a complete list of "Genetron" aerosol propellant Bulletins presently available.

**Contract fillers**—We will also be glad to put you in touch with highly capable contract fillers in all parts of the country who will put up your product in aerosol form for test marketing and handle full scale commercial production as well. *You don't have to invest a cent in plant, special equipment or personnel when you work with these contract fillers!*

Why not take advantage of these valuable services from General Chemical *now?* Call or write us today for a confidential discussion of your requirements.

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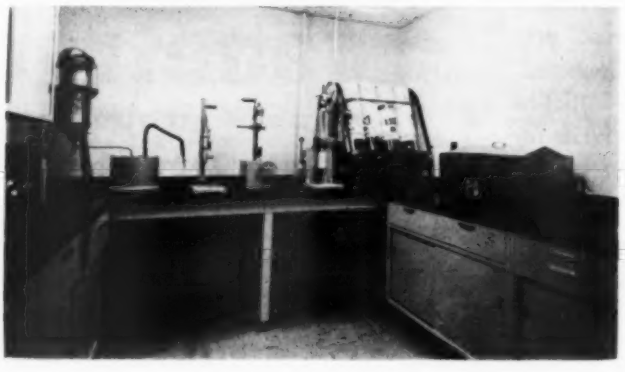
# New Aerosol Laboratory is Established at Iowa State University

UNDERGRADUATE and graduate courses in aerosol technology are penetrating more and more into the colleges of pharmacy all over the country. Latest to report the installation of a fully-equipped aerosol laboratory, and the establishment of a specific course in aerosol technology is the College of Pharmacy of the State University of Iowa, at Iowa City.

William Henderson is shown in three views of the aerosol laboratory at Iowa State. Cold fill apparatus made from five-gallon metal container may be seen at left of bottom photo.



Established last year, through a grant from the Walgreen Drug Co., Iowa State's aerosol laboratory (and the aerosol course) is supervised by Dr. Seymour Blaug, associate professor of pharmacy. Though its major purpose is to acquaint students with the basic principles involved in pressurized packaging, the equipment is made available to qualified graduate students to do basic and applied aerosol research. For instance, the man in the photographs on these pages is William Henderson, a hospital pharmacy intern from the Veterans Administration Hospital in Iowa City. He is working toward a masters degree in hospital pharmacy, and is currently working out formulations suitable for small-scale production in a hospital pharmacy (spray bandages, topical anesthetics, space deodorants, etc.).

Aerosol laboratory equipment includes standard pressure filling and crimping units, plus a cold-fill apparatus constructed from some copper tubing, an empty five-gallon metal container, and an iron stand. In the laboratory the students do a considerable amount of manufacturing for the university hospitals, and currently are turning out pressurized body lotions and hand lotions for hospital use.

The aerosol laboratory was established with the help and information supplied by the Aerosol Division of the Chemical Specialties Manufacturers Association (through its University Liaison Subcommittee), DuPont's "Freon" Products Division,

AE

# IF YOU ARE CONSIDERING AEROSOL PACKAGING FOR INCREASED PHARMACEUTICAL SALES...

## PFIZER HYDROCORTISONE, NEOMYCIN, POLYMYXIN AND VITAMINS WILL INTEREST YOU!

Firmly convinced that aerosol dispensers can open new doors to pharmaceutical sales, Pfizer continues to cooperate closely with the pressure packaging industry.

**The purpose:** To develop formulations that will permit pharmaceutical manufacturers to use most profitably the advantages inherent in pressure-packed containers.

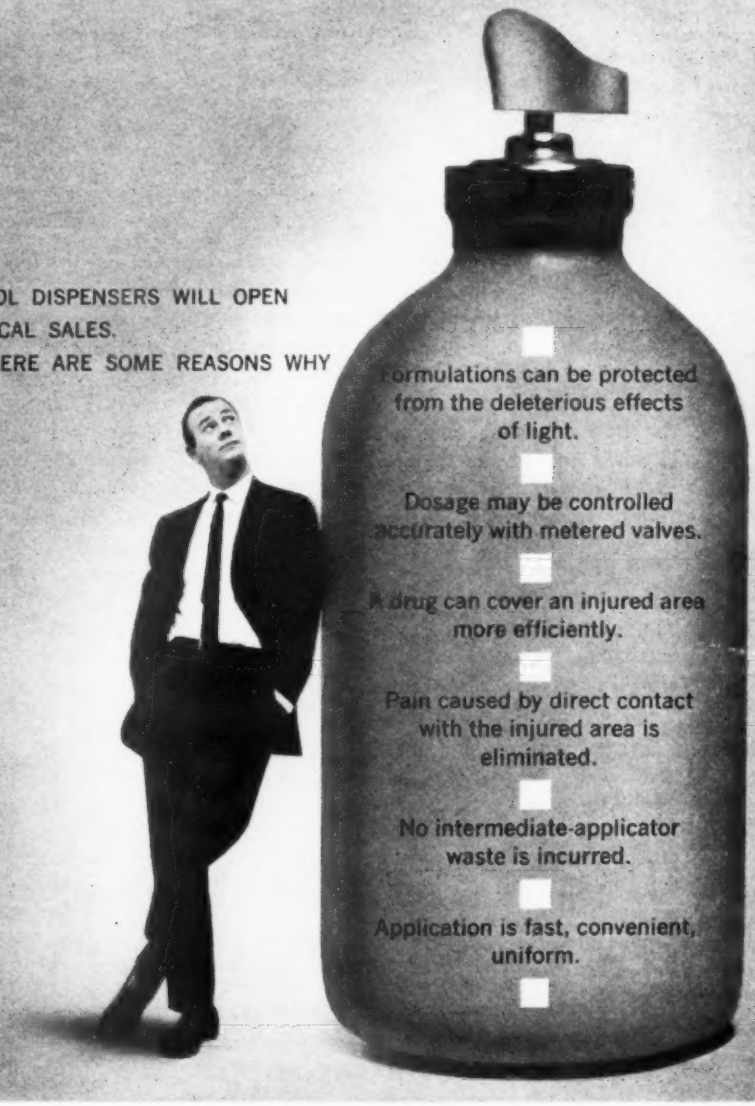
**Typical findings:** Preparations utilizing Pfizer Hydrocortisone, Neomycin, Polymyxin and vitamins are enhanced by the natural ability of pressure containers to maintain formulations completely free from atmospheric contamination.

The stability of liquid vitamins is substantially increased because the preparations are overlayed by inert gas for the life of the container.

Write to Pfizer for reprints of the interesting report "Pressure-Packed Pharmaceuticals." Technical Bulletins on Pfizer Polymyxin, Neomycin and Hydrocortisone are also available on request.

PFIZER BELIEVES THAT AEROSOL DISPENSERS WILL OPEN NEW DOORS TO PHARMACEUTICAL SALES.

HERE ARE SOME REASONS WHY



Formulations can be protected from the deleterious effects of light.

Dosage may be controlled accurately with metered valves.

A drug can cover an injured area more efficiently.

Pain caused by direct contact with the injured area is eliminated.

No intermediate-applicator waste is incurred.

Application is fast, convenient, uniform.

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and American Can Co. In addition to the aerosol equipment available in the laboratory the student has at his disposal a wide range of special equipment in the college's quality control laboratory. Everything from a simple colorimeter to a recording spectrophotometer is used in aerosol research projects.

As will be seen by the curriculum, the aerosol course is laid out in logical sequence, so that the student is able to assimilate general principles before moving on to specifics.★

**STATE UNIVERSITY OF IOWA**
**General Outline of Pharmacy 46:235 (Aerosols)**

1. Aerosols
   a. definitions, terminology
   b. general background material, two phase and three phase systems, etc.
2. Propellants
   a. fluorinated hydrocarbons
      (1) properties-solubility, vapor pressure, etc. Discussion and use of phase diagrams.
      (2) inhalation toxicity.
      (3) stability.
      (4) solubility relationships of liquefied propellants.
   b. chlorinated propellants—ethyl chloride and methylene chloride
      (1) properties, toxicity, stability, etc.
   c. non-halogenated hydrocarbons—propane, butane, pentanes, etc.
   d. inert gases—nitrogen, carbon dioxide, nitrous oxide, etc.
3. Other factors relating to propellants
   a. calculation of vapor pressure, Raoults law, etc.
   b. effect of air on pressure.
   c. spray characteristics—factors affecting droplet size and spray pattern.
   d. low pressure aerosols—use of alcohol and water in pressure packaging.
   e. pressure diluents.
4. Containers—metal, glass, and plastics
5. Valves—role of valve and actuator in various types of aerosol applications
   a. non-metering and metering valves.
6. Filling techniques
   a. Cold fill.
   b. Pressure fill.
7. Testing procedures—Chemical Specialties Manufacturers Association official testing procedures.
8. Special Problems
   a. emulsions, foams, and pharmaceutical formulations.

Text: "CSMA Aerosol Guide"
"Pressurized Packaging" — Herzka and Pickthall
Reference sheets and data booklets

# Supermarket Trends Seen Helping Marketers of Pressurized Products

THE NUMBER of products, the diversity of product line, and possibly the size of supermarkets will all increase markedly, thus giving the aerosol marketer a larger sales target to shoot at. These predictions were made recently by Robert W. Mueller, editor of *Progressive Grocer*, in an address to members of the National Canners Association at their recent convention in Miami.

One new type supermarket for the aerosol marketer, according to Mr. Mueller, will be the so-called "super general store," a supermarket incorporating pharmacy, sporting goods, auto supplies, luggage, major appliances, and clothing along with its usual grocery, meat, produce, and dairy sections.

"At present there are perhaps 100 super general stores operating. By 1965 there may be 700 to 800—or one super general store for each 50 to 60 standard supers. Most such stores will probably never handle more than 1½ or 2% of total grocery sales. These stores will be a bigger factor in the discount store business than in the food business." Mr. Mueller explained that the trade does not really consider the super general store to be *the store* of the 60's, since it must draw on a considerably larger area than conventional supermarkets.

The public will buy more of its *non-food* requirements in food stores in the period ahead, it was predicted. Mr. Mueller forecast that by 1969 there will be 40,000 supermarkets doing business, as against 29,500 in 1958. By that time, he said, the supermarket share of U. S. grocery sales will rise from 68% in 1958 to 75% in 1969.

In number of items, an essential area for the aerosol marketer, the figure is expected to rise from 5,400 in 1958 to 6,400 in 1965 and 7,000 in 1969. This is figured on the premise that the average store is adding 6.8 new items and dropping 4 items each week.

"And so in the years between now and 1965, for example, the typical supermarket warehouse will have added about 2,500 new items—and dropped approximately 1,500 items—for a net gain of 1,000 items. If stores do not increase in size, will

(*Continued on Page* 92)

# another extra base hit for SIMONIZ

## with a VCA valve naturally!

TONE, the new aerosol furniture and appliance spray with long-lasting luster, adds an "extra-base" cleaning power to the Simoniz line. To assure maximum reliability and performance, Simoniz specified VCA valves and fitments.

That's why TONE features a VCA B-9 fast-gassing valve with nylon stem and a specially constructed mechanical breakup button with stainless steel insert. Because Simoniz, like countless other aerosol manufacturers, knows the value of having VCA components in their lineup.

VCA's engineering and research have significantly contributed to the development of many aerosols that are now regarded as standard products. Whether it is the creation of a totally new concept or the improvement of an already developed product, VCA has the experience to solve your problem.

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**1720 Fairfield Ave. • Bridgeport, Conn.**

# Consultant's Corner

*by Robert A. Foresman, Jr.*
**Aerosol Consultant**
**Philadelphia, Pa.**

## *Unwanted Water in Pressurized Packages*

UNWANTED or "tramp" water in aerosols propelled by fluorocarbon gases is a continuing problem which frequently makes its presence felt when least expected, in the most critical circumstances.

Water can exist in an aerosol package in two forms: free water existing as droplets—generally that on the surface of the liquid contents is the most important from a corrosion standpoint. Or as dissolved water—in reality an actual physical ingredient of the liquid contents—which can generally reach quite large levels without being too serious from a corrosion standpoint.

Water may cause trouble in a number of ways. It may hydrolize propellants or other ingredients, with the consequent production of corrosive by-products. It can also cause hydrolytic or acidic polymerization of active ingredients with the result that product activity (in the case of insecticides or other economic poisons) will be reduced or rendered non-existent. In addition, the products of polymerization may be gummy or solid precipitates which will clog the valve or perhaps collect on the bottom or surface of the contents or adhere to the wall of the container; so that even though the slightly polymerized material might still be effective if it *could* reach its objective, it would never leave the container.

ASIDE from the reaction of water with the can contents, pure water is one of the most difficult materials there is to handle in a metal container and corrosion resulting from direct action between water and the container metal is far from uncommon.

Since there are many successful products on the market which contain large quantities of water a most obvious question can be, "When is it acceptable and when can it be expected to become a bad actor?"

First of all, the particular propellants used have the greatest bearing on the acceptability of water. Propellant 11 is readily hydrolyzed, as is also 1, 1, 1 trichlorethane (uninhibited Chlorothene) and methylene chloride. Historically, Propellant 114 was introduced into aerosols originally (and is still used for the purpose) to blend with Propellant 12 for water-base materials in order to avoid the difficulty caused by Propellant 11.

In an aerosol package, the mechanism of corrosive breakdown due to a water-propellant reaction occurs in steps. First the propellant is hydrolyzed, hydrochloric acid is released, the hydrochloric acid in turn reacts with the other ingredients and the metal of the container. As the metal comes under attack the process accelerates—apparently due to increasing catalysis of the reaction by release of the metal ions. In the course of time (frequently quite a short period), the can wall is perforated and the package destroyed. An interesting and little studied collateral phenomenon is the production of a characteristic breakdown odor. I am of the opinion that this is caused by haloalcohols resulting from the propellant hydrolysis. Chloromethanol is usually referred to in the literature as a short-lived intermediate, but I suspect that in an aerosol package some variation of it may exist for an appreciable period of time.

Another interesting aspect of propellant hydrolysis is that apparently any mixture of gases will be *more* subject to hydrolysis than the pure gases alone. This is apparently true whether it is a mixture of pure hydrocarbons, pure halocarbons, or whether it is a mixture of halocarbons *and* hydrocarbons. So far as I know, this has never been studied in any great detail. Perhaps its study is of only academic interest to the aerosol industry, but it may have important implications in the overall chemistry of the materials involved.

It was mentioned earlier that dissolved water is not as serious as free water. While this is true from a purely corrosion standpoint, it cannot be said unequivocally that the dissolved water will *not* damage other formula ingredients. Where glass containers are used, obviously there cannot be corrosion and metallic ion catalysis, but drugs, vitamins, and topical preparations can all interreact with water and its level should be a matter of genuine concern.

Because of the effect on storage life — whatever the manifestation — insecticides and other similar materials are normally specified as acceptable only if the water content is below a certain point. This level is practically always below 100 parts per million (ppm) and can be as low as 25 ppm. Refrigerants for the refrigeration industry (which, of course, takes in propellants as a

(*Continued on Page* 91)

# *The People* Behind the Seal*

H. R. Shepherd

Samuel B. Prussin

Ethel F. Walsh

David Benzaquen

Fred Pressey

Val Rossetti

James D. Russo

Davis Phillipson

Peter Sgabarietta

Earle E. Taylor

Fay Mowery Moore

Carmelo Carrion Jr.

Philip H. Klappi Jr.

Sidney Sobell

* *And the most important people, of course, are the men and women in the plant and laboratories whose skills and day-and-night effort make possible the product of ATI.*

ATi

# AEROSOL TECHNIQUES

INCORPORATED

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WESTERN DIVISION: 6423 Bandini Boulevard, Los Angeles 22, California

# AEROSOLS in review

**In this column important aerosol subjects appearing in other periodicals (both domestic and foreign) will be reviewed and summarized. It is felt that this service will enable the reader to keep abreast of most of the significant contemporary articles on the industry, even though they may appear in other periodicals. Since there is a chance that some pertinent articles may be overlooked, it will be helpful if readers will call our attention to any they judge important enough to review.—*The Editor.***

## *Aerosol Future Seen for Injectable Drugs*

INJECTABLE pharmaceuticals may someday be packaged in aerosol form, Walter C. Beard, Jr., director of research for Risdon Manufacturing Co., told *Drug Trade News* in an interview published in the March 7 issue of that paper. Mr. Beard suggests that the pharmaceutical be packaged in a sterile aerosol package, consisting of a valve attached to a needle on a small glass bottle. The needle would be protected by a sanitary cover, to be removed prior to use. After insertion of the needle, the valve would be opened to permit the drug to be forced through the needle.

This method, Mr. Beard contends, would eliminate the "need for the present cumbersome process requiring careful handling and assembly of the sterile syringe and needle, followed by withdrawal of preparation from the serum bottle." He advises that such a technique would now be feasible for intramuscular and subcutaneous injections, but that the possibility of the introduction of propellant into the blood stream might preclude immediate development of a device for intravenous administration.

Such a device would be especially important in the veterinary field, the Risdon research director points out. Use of a large pressurized container equipped with metering valves, would make it possible to inoculate many animals quickly.

Another aerosol use in the veterinary field he suggested as forced feeding of vitamins, food supplements, and other medications. "Through the use of special applicators, mastitis preparations are administered to cattle. Here again, single doses or multiple doses are possible from containers having regular or metering valves."

•

PROBABLY one of the most valuable articles ever published on the aerosol industry in Great Britain is featured in the February issue of *Chemical Products*. Called "Aerosol Review," it lists all marketed British aerosol products and includes marketer, brand name of product, purpose, active ingredients, propellant, type of container, and type of valve.

The two most numerous product categories are flying insect sprays and room deodorants, though hair sprays, pharmaceuticals, veterinary products, and industrial products all show surprising strength of numbers for a country with a total aerosol production of only about 25 million.

The 10-page comprehensive listing reveals that Precision is the leading valve being used in Great Britain, and that Metal Box is the leading container supplier. The article indicates that there are only three toothpastes on the market so far (Colgate, D. W. Gibbs, and Pepsodent). Some 20 veterinary products are divided up among three marketers—Day, Son & Hewitt, Ltd.; Walter Gregory & Co.; and Osmond & Sons, Ltd.

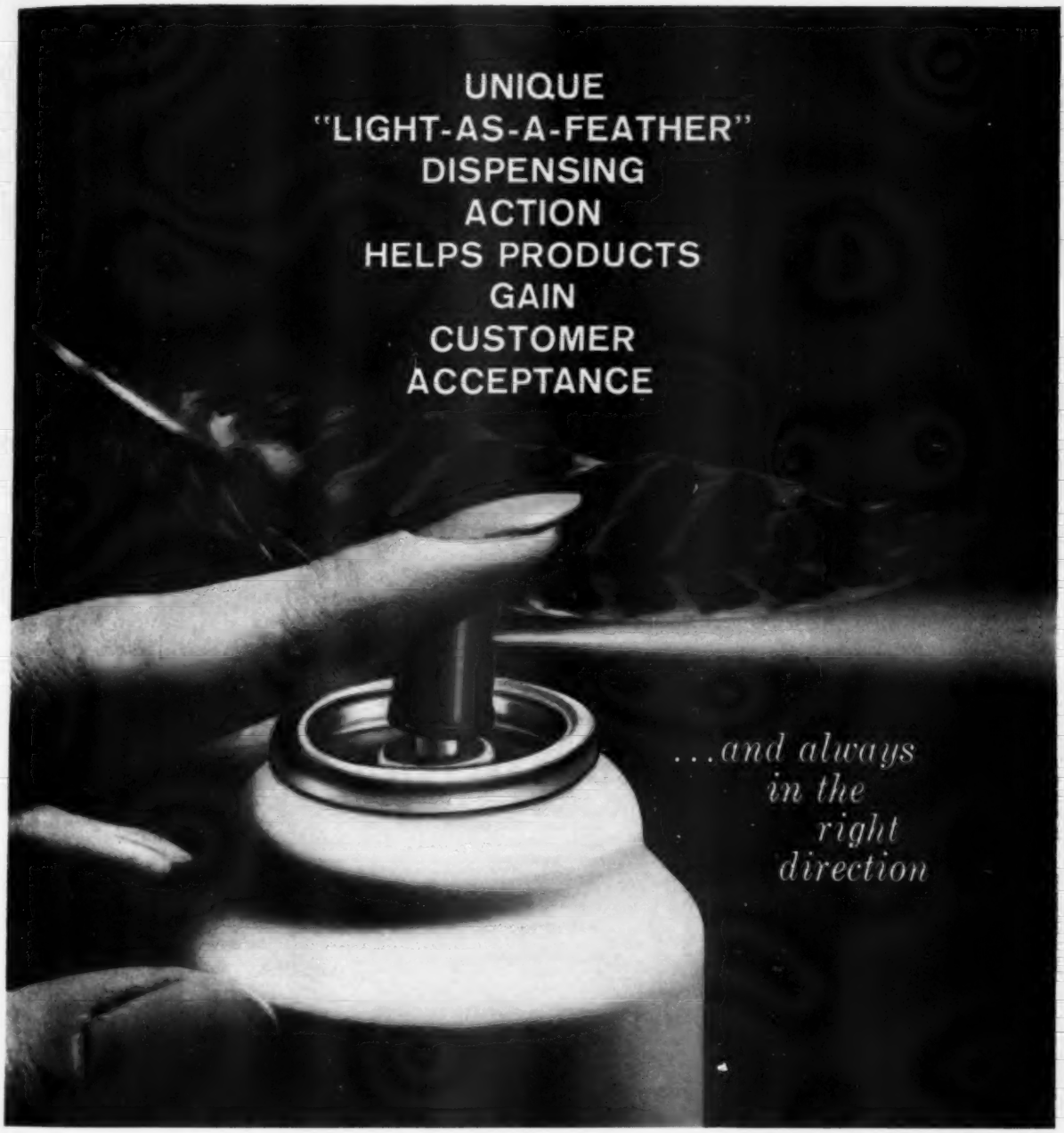
A DETAILED description of one company's aerosol stability program is provided in the March issue of *Pressure Gauge*, periodical published by Aerosol Techniques, Inc., Bridgeport filler. Written by Fred Presant, the company's director of research and development, the article covers such subjects as initiation of a stability program, inspection of samples, and reporting of results.

Mr. Presant explains in detail what his company's policy is on storage of samples: "Sample from each variable, plus the glass bottle reference samples, are stored at the following temperature variables for the length of the stability program:

a. Accelerated Temperature = 100°F.
   Six samples of each specific packaging and formulation variable.
   One sample in clear plastic coated glass aerosol bottle.
   One sample in glass of non-volatile concentrate.
b. Ambient Temperature = Room Temperature.
   Six samples of each specific packaging and formulation variable.
   One sample in clear plastic coated glass aerosol bottle.
   One sample in glass of non-volatile concentrate.
c. Reference (Refrigerator) Temperature = 45°F.
   One sample in clear plastic coated glass aerosol bottle.
   One sample in glass of non-volatile concentrate.

"The physical space required for a large-scale stability program, covering a great many types of containers, obviously is quite substantial. Aerosol Techniques' stability program for accelerated temperature testing utilizes

(*Continued on Page* 102)

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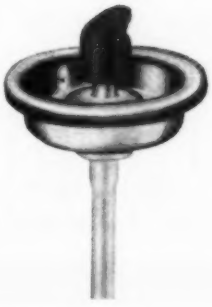

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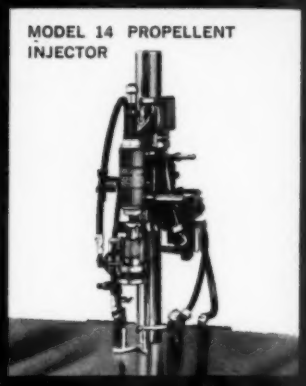
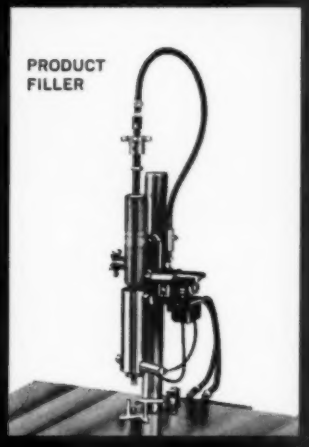
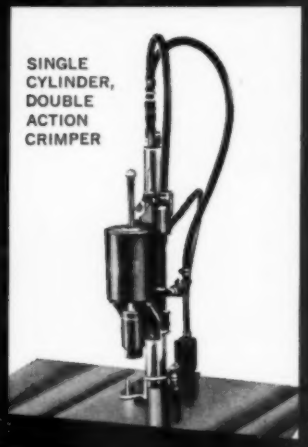


MODEL 14 PROPELLENT INJECTOR



PRODUCT FILLER



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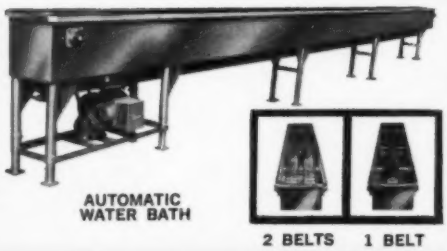

AUTOMATIC WATER BATH

2 BELTS 1 BELT

# NEWS of Pressure Packaging

## Mina Leaves Lodes Firm for New Drug Post

Dr. Francis A. Mina, former technical director of Lodes Aerosol Consultants, Inc., New York, has left that company to take up the post of clinical research associate with the Reed Carnrick Co., Kenilworth, N. J., ethical medicinal marketer. He had served in the Lodes Co. since May 1, 1957.

Dr. Francis A. Mina

Reed Carnrick is a 100-year-old firm with a substantial reputation in the pharmaceutical field. Among its other products is one aerosol—"Tarcortin," a topical antibiotic for dermatosis.

Dr. Mina is widely known in the aerosol industry as the developer of the first three-phase system, and for the subsequent refinement into the ultra-low pressure system for dispensing alcohol-based products. He received his B.S., M.S., and Ph.D. degrees from Fordham, where he majored in physiology.

In 1946 he joined Zonite Products, where he served as chief chemist and later as technical director. When Zonite, which subsequently became Chemway Corp., acquired the E. A. Bromund Co. and made it a subsidiary, Dr. Mina was made vice-president and general manager of Bromund. Most of his aerosol developments were made while he was associated with Chemway.

Dr. Mina has been active on a number of the CSMA's Aerosol Division committees, including the University Liaison Subcommittee, Glass Container Subcommittee and the Food Subcommittees of the Scientific Committee. He is credited with being a major influence in organizing the current Aerosol Technology Seminar at St. John's University, Brooklyn, N. Y. He is a member of the American Pharmaceutical Association, Society of American Bacteriologists, New York Academy of Sciences, American Chemical Society, and a number of other technical societies.

•

### Bradford Aerosols Is Sold

Bradford Aerosols, Ltd., Bradford, Yorkshire, England, six-year old aerosol filling and marketing firm, has been purchased by Reckitt and Sons, Ltd., Hull, a subsidiary of Reckitt and Colman Holdings. The Bradford firm, marketer of "Floret" aerosol insecticide, "Lustair" hair spray, "Haze" room deodorant, "Mothproofer," and "Sun Tanning," sold approximately one million units last year.

The company was formed in 1954 by Reginald Slater and Harold Fieldhouse to produce "Floret" fly spray. In the first year, 65,000 units were produced, and in 1955 the room deodorant was introduced. The sun tan spray and the hair spray were brought out the following year.

According to Mr. Slater, the company had reached a point where its quarters and production facilities were insufficient to meet the rising demand for its product line. Rather than move the plant and install new equipment, he considered offers from three major British companies before selling to Reckitt.

The company's inventory and production equipment have been moved to Reckitt's headquarters plant at Hull.

•

### New Cincinnati Custom Filler

Cincinnati Aerosol Corp., a new custom filling company, has been organized and will operate from a plant at 125 Terrace Drive, Cincinnati 15, Ohio. According to David T. Stebbins, president, the new company will have facilities and bulk storage capacity to turn out "at least" 450,000 units per week.

Equipment includes double-indexing gassing units made by JG Machine Works, New York. Line will handle nitrogen as well as fluorinated hydrocarbons for containers ranging from three to 24 ounces. Warehousing facilities will be made available to the company's customers by summer. Products filled by Cincinnati Aerosols include insecticides, paints, waxes and polishes, room deodorants, hair sprays, toothpastes, and other chemical specialty-type and cosmetic products with the exception of foods and pharmaceuticals.

•

### Rapid Pressure Method

The Aerosol Scientific Committee of the Chemical Specialties Manufacturers Association has completed preliminary work on development of a new rapid method for determination of pressure in aerosol containers. The method is currently being circulated to the membership of the Aerosol Division, and will be voted on at the May CSMA meeting in Chicago.

•

### PMMI Lists '61 Show Date

The Packaging Machinery Manufacturers Institute will hold its biannual show at the new Cobb Hall, Detroit, from Nov. 7-10, 1961.

## Revlon President is Sued By Brother

REVLON, INC., New York, major cosmetics manufacturer, and its president, Charles Revson, late last month were named respondents in a $601,460 damage suit brought by Martin E. Revson, former executive vice-president of the company and younger brother of Charles Revson. Entered in the U. S. Supreme Court, the suit accuses Charles Revson of fraud, misrepresentation, and breach of agreement in a stock deal involving a voting trust agreement under which he is alleged to exert personal control of the company.

Specifically, it involves a 1955 agreement under which both brothers put Revlon stock in a voting trust, with Charles as the sole voting trustee. Martin Revson contends that Charles had induced him to put a total of 231,400 shares of Revlon stock into the trust, and that Charles still retains control of 51% of Revlon voting stock under the trust agreement. Martin charges further that Charles insisted on a complicated deal in which Martin exchanged 100,000 of his shares of Revlon stock for an equal value in common stock of the Schering Corp. At the time, Martin contends, Charles advised that Schering stock would rise in value faster than the Revlon stock (during a period between Aug. 15, 1958 and July 15, 1959), but that it had in fact yielded him $3 less per share than the market price of 100,000 of his Revlon shares. The $601,460, Martin says, represents the value of the Schering stock which he should have received *in excess* of what he actually received in the exchange.

One essential charge in Martin Revson's suit is that Charles' "mistreatments" and "abuse" of Revlon company executives had caused a number to leave the company and made it difficult to recruit others. He contends that this practice was damaging the company and *his* investment. Because of this, in 1958, when he resigned his position as executive vice-president and asked for the return of his stock, he contends, Charles insisted on the complicated stock deal which cost him $601,460.

Charles Revson's attorney immediately asked that the court strike out the part of the complaint charging mistreatment of executives. He called it "irrelevant, scandalous, and prejudicial." Martin's attorney contended that this was part of the case because it was so important in Martin's withdrawal from the trust agreement. Justice Thomas A. Aurelio reserved decision on the action.

### Colgate Appoints Costello

The appointment of Dr. Christopher H. Costello to the newly-created position of Director of Research for its Pharmaceutical Laboratories Division has been announced by the Colgate-Palmolive Co., New York. He will plan and direct all research and development work of the Pharmaceutical Division, and also will be responsible for the division's scientific programs and technical personnel.

Prior to joining Colgate-Palmolive, Dr. Costello had ben associated for the past ten years with the Columbus Pharmacal Co., Columbus, O., most recently as vice-president and scientific director. He attended Northeastern University and Harvard Graduate School and received his Ph. D. in chemistry and pharmacology from the Massachusetts College of Pharmacy. He served at the latter institution as an instructor of chemistry.

•

### Bombrini Names U.S. Agent

Impact Container Corp., 135 Oakland Place, Buffalo 22, has been named exclusive distributor of Bombrini Parodi-Delfino aluminum aerosol containers throughout the U. S., Canada, and Mexico. Impact Container is a newly-formed company headed by Dean M. Rockwell, former sales manager of Tube Manifold Co.

Bombrini's Aerosol Containers

The company said it can offer immediate delivery of high volume quantities of the seamless containers in 3, 5, 7, 12, 18, 35, and 37-ounce sizes. Larger of these is a special high-pressure unit. All are available with epoxy interior coatings and four-color lithograph labeling.

•

### Data Sought on Weights

The Chemical Specialties Manufacturers Association has been asked to prepare a paper dealing with test methods for aerosol containers for delivery at the 45th National Conference on Weights and Measures in Washington on June 6. Among the questions which the article is to answer are:

(1) Why are commodities traditionally labeled by liquid volume being labeled by weight in aerosol containers?

(2) Is the weight of the propellant included in the labeled net weight? If so, why, since propellant is not usable?

(3) Is the industry working toward standard containers for similar commodities, and if so what progress has been made?

A committee headed by Harry Peterson (Peterson Filling & Packaging Co., Danville, Ill.) is at work in preparation of the paper, and indicates that it will welcome assistance from other industry members in order to meet the pre-conference deadline of May 1. While decisions of the conference have no specific legal implications, they are often used as a guide by local officials in their enforcement of regulations.

•

### Givaudan Moves Branch

The Chicago office of Givaudan-Delawanna, Inc., and its associate companies, Givaudan Flavors, Inc., and Sindar Corp., have moved to new and modern quarters located at 6778 Northwest Highway, Chicago 31. The new telephone number is NEwcastle 1-9090.

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## for manufacturers

MORE SALES

*FITS ALL CANS*

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### *Factor Names Two VP's*

Election of Chester Firestein and Lee Rosene as new vice presidents was announced last month by Max

Rosene Firestein

Factor & Co., Hollywood, Calif., cosmetics manufacturer.

Chester Firestein, director of the firm's United States merchandising, is a member of the third generation of the Max Factor family. He is a grandson of the late Max Factor, Sr., and the son of Max Firestein, executive vice president.

Lee Rosene is director of United States sales for Max Factor & Co.

Mr. Firestein was graduated from U.C.L.A., where he received his Masters Degree in Business Administration. In 1955, he joined Max Factor & Co., where he has been an executive in the accounting and sales divisions, prior to being appointed director of United States merchandising in 1957.

Mr. Rosene joined Max Factor & Co. in 1936 as a sales representative. In 1946, he was promoted to a divisional sales manager, and in 1951, he was named regional sales manager in charge of all mid-western states. He was appointed director of United States sales in 1957. Before coming to Max Factor & Co., he was the cosmetic buyer for a large chain of Chicago department stores, and before that was in the merchandising department of Walgreen Drug Company.

•

### *Aerosols on Radio Program*

"Everybody's Chemistry," a radio program over Station WFUV in New York, was devoted entirely to a discussion of aerosols on March 23. The Fordham University broadcast had as its principal speaker Dr. John J. Sciarra of St. John's University.

Though mainly concerned with the general aerosol idea, and the physical explanation of how the various systems work, part of the discussion was devoted to explaining some of the advantages of aerosol-dispensed pharmaceuticals. The program was sponsored by the American Chemical Society.

•

### *Form Mexico Aerosol Assn.*

"Asociacion Mexicana de la Industria de Aerosoles" is the name of a new aerosol association which has been formed in Mexico. Membership is made up of 16 aerosol manufacturers and custom fillers.

President of the association is Ernesto S. Maurer, general manager of RI-KS, S.A. and vice president is Ralph Wiegandt, general manager of Dispersol S.A. Other officers include: treasurer, Hugo Albo Novoa, general manager of Shulton de Mexico; assistant treasurer, Miguel Reyes, assistant manager of Distribuidora Minco; secretary, Carlos de Navia-Osorio, general manager of Fiorege S.A.; and assistant secretaries, Juan Alvarex del Castillo and Adolfo Alvarex, both of Virmex.

According to Sr. Maurer, the association offices at Medellin 150, Mexico City 7, would welcome promotional literature from manufacturers of filling equipment, valves, containers, and raw materials.

•

### *Swiss Valve Tariff Rises*

The Government of Switzerland has issued a new Customs Tariff which affects the tariff on aerosol valves imported into Switzerland. In a ruling effective Jan. 1, the tariff was raised from 45 Swiss francs per 100 kilos to 150 Swiss francs for the same amount.

Upon learning of the Government's intention, the International Aerosol Association, Swiss-based aerosol trade association, filed a brief with the Swiss Federal Customs Department requesting that such valves be placed under another customs category, and that the increase be voided. In response to the IAA petition, the Swiss Federal Customs Department established the tariff on valves to 75 francs per 100 kilos, or about half the uniform rate originally proposed.

### *Pennsalt Names Two in Sales*

E. Smedley Ward, Jr., and Homer B. Greetham have been given new sales assignments by the "Isotron"

Ward Greetham

Chemicals Department of Pennsalt Chemicals Corp., Philadelphia.

Mr. Ward, a graduate of Dartmouth College with a BA degree in chemistry, and previously "Isotron" sales representative in Cleveland, has been assigned to the New York territory. Before joining Pennsalt in 1957, he was a sales representative for the Gulf Oil Corp. in Philadelphia. A veteran of World War II and the Korean War, he served as a U. S. Navy commander.

Mr. Greetham will be serving aerosol contract loaders and vendors in a territory which includes Ohio, northern Kentucky, and lower Michigan.

He attended the University of Arizona and served in the U. S. Army during World War II. Before joining Pennsalt's "Isotron" department this year, he was employed in sales and product development for the Cleveland Electro Metals Co.

•

### *Breck Advertising Cited*

Point-of-purchase advertising for "Hair Set Mist," aerosol hair spray of John H. Breck, Inc., Springfield, Mass., has received the top award in the eighth annual Merit Award Contest of the Advertising Club of Springfield. Breck contest entry selected for the award was the firm's full color packaged window display.

•

### *Andre Wick Retires*

Andre Wick, board chairman of Houbigant, Inc., New York, retired last month after 40 years of service with Houbigant and Cheramy. He came to the U. S. 35 years ago and served first as assistant manager.

# Wheaton

## PHARMACEUTICAL AEROSOL PACKAGING

Recognized and accepted by physicians and discriminating patients throughout the ages, glass has been the container of choice. With added complications of formulation, the plastic coated glass container offers complete assurance of aerosol product stability.

The Wheaton companies, who have pioneered many innovations in Pharmaceutical packaging, offer you the services of their highly qualified aerosol chemists and their extensive research and development laboratories to assist in the formulation of your aerosol product.

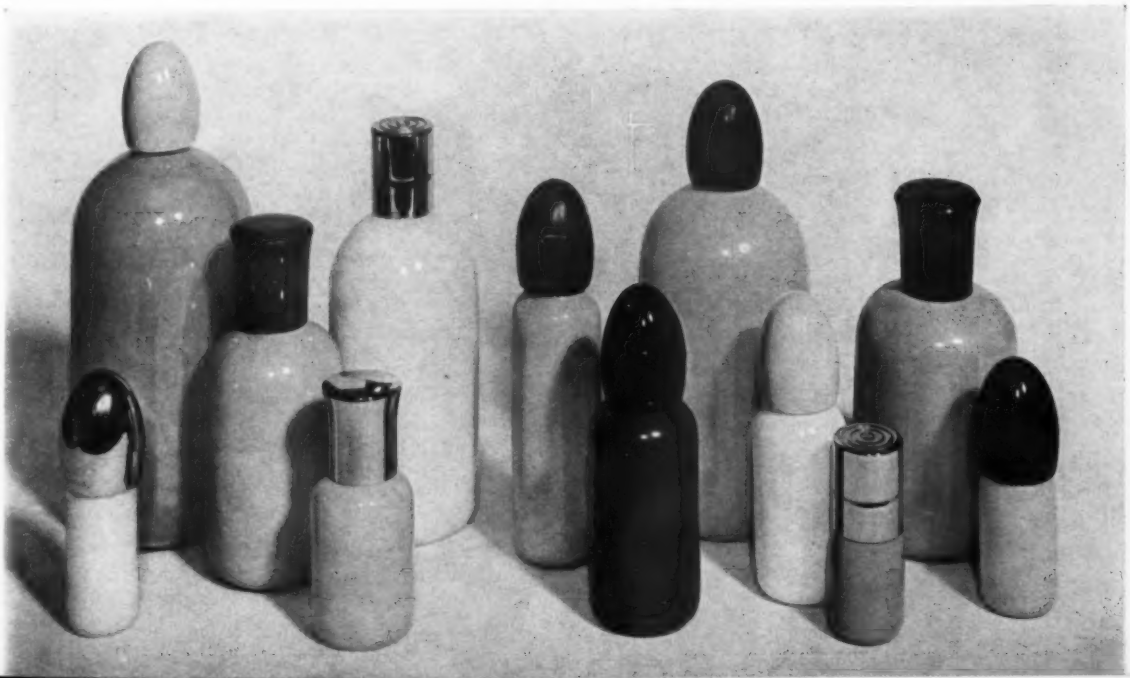
Pharmaceutical companies requiring a glass resistant to acid and alkaline attack can specify Wheaton No-Sol-Vit (U.S.P. Type 1) glass. This is a borosilicate glass of a special composition having high chemical durability.

Only Wheaton Containers HAVE BUILT IN VENTS AND KEY LOCKED PLASTIC COATING Pat. No. 2,906,462 Other Pats. Pend'g.

PLASTI-COTE

**WHEATON PLASTICS COMPANY**

**MILLVILLE, NEW JERSEY**



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## Wheaton

## . . . . PLASTIC COATED GLASS AEROSOLS for FOOD PRODUCTS

Long accepted and recognized as the perfect medium for food packaging, glass, for your aerosol products, is the only inert container. With the added protection of the rugged plastic coating these containers are designed to handle pressures from liquefied gases up to 25 psig at 70°F. or from compressed gases up to 90 psig. These features combined with a pleasing overall background color ready for a silk screen or paper label, add up to a real eye-catching package. A complete range of sizes is available from stock, ranging upward from less than one ounce. The smaller size containers are ideally suited for concentrated flavorings and seasonings. Wheaton staff artists will assist you in designing a distinctive private mould package. Our laboratory will cooperate and assist you in your formulation problems. Write for eight-page illustrated brochure. See other side for specifications on aerosol rounds.

PLASTI-COTE

**WHEATON PLASTICS COMPANY**

**MILLVILLE, NEW JERSEY**

For free sample of our latest product creation write to department A.

### *Fairfield Chem. Given Award*

The Gold Medal Award of *Canner Packer Magazine*, for an "outstanding" insecticide, has been presented to Fairfield Chemical's "Pyrenone."

John A. Rodda (right) general manager of Fairfield Chemicals Division of Food Machinery and Chemical Corp., New York, is shown receiving the award from Thomas Vought, representing *Canner Packer*.

Fairfield's product was the only insecticide product cited. The Gold Medal is awarded for "outstanding innovations or improvements in equipment or supplies used by processors of food."

•

### *Vick Chem Buys Clearasil*

Clearasil, Inc., leading marketer of specialty products for pimples and other minor skin irritations, has been purchased by The Vick Chemical Co. for an undisclosed amount of cash. The acquisition became effective March 1.

Ivan D. Combe, president and founder of Clearasil, will become a consultant to Vick on operations of Clearasil business.

•

### *Lilly Forms New Division*

Eli Lilly and Co., Indianapolis, major pharmaceutical marketer, has announced formation of the Elanco Products Co., which will operate as a division of Lilly to market items for agricultural, industrial, and home use. The new division will merchandise and market products which result from Lilly agricultural and industrial applications research.

Elanco will be headed by George L. Varnes, former executive director of Lilly's Agricultural and Industrial Products Division. He joined the company as a salesman in 1940 and since then has held a number of management positions, including manager of materials control, assistant director of production control, and general manager of operations.

•

### *Revlon VP Resigns Post*

Mort Green, director of television and radio for Revlon, Inc., New York cosmetics company, resigned last month after less than a year with Revlon. Prior to coming with the company, he was a writer for Perry Como, Milton Berle, and other television and radio stars.

Mr. Green's resignation followed by less than a month the consolidation of Revlon's advertising accounts (*Aerosol Age*, March), and by two months the resignation of F. Kenneth Beirn as vice-president in charge of advertising (*Aerosol Age*, January).

### *Mellick Named Hysan VP*

Hysan Packaging Corp., Chicago custom filler, last month announced the appointment of Charles Mellick as vice-president in charge of all operations. The position primarily involves development of technical contacts with firms currently active or interested in marketing aerosol-packaged products.

Mr. Mellick has wide experience in coating compounds, rust preventives, cosmetics, sanitary maintenance products, photographic supplies, etc. A laboratory section devoted exclusively to aerosol operations will assist him in his service programs.

•

### *Penick Strike Ends*

A five-week walkout against S. B. Penick & Co., New York, ended early last month when the company's employees accepted a new two-year contract. The strike called by Local 153 of the International Chemical Workers, affected 340 Penick employees at the company's plants in Newark, Jersey City, Lyndhurst, and Montville, N. J.

**J.A. Schmalbach**

Aktiengesellschaft

B R A U N S C H W E I G

*The Aerosol Pioneers of Germany*

Cans Valves Filling

Please have a look at our Exhibition "10 Years Aerosol in Germany" which is specially prepared for the International Congress of the Federation of European Aerosol Associations.

### *Koster Named to Gard Sales*

Edward J. Koster, Jr., has been appointed national sales manager of the Itt division of Gard Industries, Inc., Northfield, Ill., aerosol filler and marketer. A specialist in direct sales operations, he was formerly district manager for Encyclopedia Brittanica and also a member of the national staff for Brittanica Junior. He previously conducted his own business as a sales promotion consultant and in a prior connection was sales manager of Fire Detection Service of Illinois and Wisconsin.

The Itt line currently offers 21 aerosols for home and outdoors. Included are a weatherproof spray for hats, clothing, shoes, upholstery, convertible auto tops, and sporting equipment; spot remover; shoe shine spray; and suede conditioner — personal items, including a lavender sachet, body powder, and foot spray—and such household products as room deodorants, glass and porcelain cleaner, furniture wax, penetrating oil, anti-rust spray, fire extinguisher, dust cloth spray, insecticide, ant and roach spray, insect repellent, moth proofer, pet spray, plant booster, and spray paints. Gard's Itt Division prepares all sales aids for the distributors, as well as recommended programs and suggestions for selling, recruiting, management, and planning. Much of the division's activity is devoted to sales through fund-raising organizations, for which special cooperative programs have been set up.

In his present capacity, Mr. Koster is also in charge of distributor franchises for Gard's Tap line of aerosol products, a subsidiary line sold through general retail outlets.

•

### *R&H Appoints McBurney*

Dr. Charles H. McBurney has been appointed director of research of Rohm & Haas Co., Philadelphia chemical manufacturer. The position was previously held by Dr. Ralph Connor who continues as vice-president in charge of research and chairman of the board. Dr. McBurney has served as assistant director of research for the past ten years.

Dr. McBurney received his B.S. in chemistry from the University of Oregon and his M.S. from Oregon State, where he worked in the field of biochemistry. He received his Ph.D. in organic chemistry in 1939 from the University of Illinois where his research was directed by Dr. R. C. Fuson. Since that time he has been with Rohm & Haas, where he has been engaged in research in the fields of leather, textiles, coatings, agricultural chemicals and plastics.

•

### *Country Aerosol Use Up*

Town and farm women are probably far better versed in the benefits of aerosol packaging than most industry observers think. This fact was revealed in a new "Minnesota Homemaker Survey," just released by the *Minneapolis Star and Tribune*, which broke down each buying category according to those living on farms and in towns of less than 2,500, and those living in larger towns and cities.

The best documented of the aerosol items was pressurized hair items (mainly hair sprays) which revealed gains in purchases from 19.8% in 1955 to 28.6% in 1959 (for cities) and from 16.0% in 1955 to 29.0% in 1959 (for farm and town women). Room deodorants, a category not included in 1955, showed a figure of 66.0% purchased for farm and town women and 60.5% for city women.

### *Flam-Haft Names Miserendino*

Thomas Miserendino has joined Flam-Haft Laboratories, Inc., New York manufacturer of aromatics and perfume raw materials, as vice-president and perfumer-in-charge of the company's expanded perfume and flavor departments.

Mr. Miserendino had been vice-president and chief perfumer for Perfumery Associates and Ph. Chaleyer, Inc. He is a member of the American Society of Perfumers and has been associated with the industry since 1939.

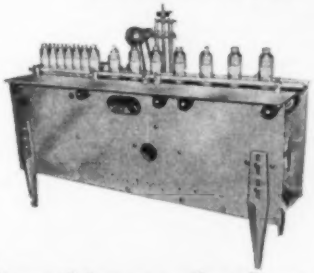
•

### *Colgate Buys Drug Co.*

S. M. Edison Chemical Co., Chicago, marketer of "Dermassage" medicated body lotion and other surgical and pharmaceutical products, has been acquired by the Colgate-Palmolive Co., New York, as part of that company's continuing expansion into the drug field. First announcement said the Edison firm will continue operations as a wholly-owned Colgate subsidiary. The acquisition involved an exchange of stock.


**KIWI®**

**AEROSOL CODE DATING EQUIPMENT**
**that has *earned* industry acceptance**



**POWER DRIVEN CODER**
With work table area.
For automatic code dating of concave bottoms of aerosol cans.
Will mark top, bottom, or both at the same time.

***Something new has been added . . .***

**CASE CODE DATER**
**with Kiwi built-in rubber band type.**
- **No loose type to become lost**
- **Ink just once per shift**
- **Never needs cleaning**
- **Inker never dries out**
- **Prints in the same place on every case**

***Also . . .***
case printers for consecutive numbering or printing information on cases

**KIWI® CODERS CORPORATION**
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**Ucon** brand propellants put action in products

*Why don't you discover Ucon Propellant service, too?*

Ucon and Union Carbide are registered trade marks for products of

**UNION CARBIDE CHEMICALS COMPANY**

Division of Union Carbide Corporation

30 East 42nd Street, New York 17, N. Y.

## *Perfumers Society Lists Program for April 28 Meeting*

The American Society of Perfumers last month announced the complete program for its sixth annual open symposium. The symposium will be held April 28 at 2 p.m. at The Essex House Hotel, New York City. Program will be followed by a cocktail hour and buffet, which are included in registration fee of $15.

### Program

*Theme*: "Abstract and Practical Thoughts in Perfumery"
*Opening Address*: Bernard Polak (PFW), president
*Introductory Remarks*: Walter Lengfelder (Fleuroma) symposium chairman
*A Modern Approach to the Evaluation of Bergamot Oil*, by Fred C. Theile, Donald Dean and Robert Suffis (Shulton)
*"Fragrance and the American Male"*, by E. R. Van Liew (Givaudan)
*"The Influence of Human Temperament in Odor Selection"*, by Alfred H. Moeller (Noville)
President of honorary membership by President Bernard Polak to Edward S. Maurer, F.L.S., M.R.I., of London, England.
*"Pitfalls in Perfumery"*, by Dr. Oliver L. Marton (Shulton)
*"Perfumers and Patents"*, by Thomas Cifelli, Jr. (Richards and Cifelli)
*"The Abstract Concept in Perfumery"*, by Walter Lengsfelder (Fleuroma)
Discussion Period: Moderator: Frazer V. Sinclair (*Beauty Fashion, Drug & Cosmetic Industry*)

### *New OI Plastics Plant*

Owens-Illinois Glass Co., Toledo, has announced that its first Pacific Coast plant for the production of semirigid plastic containers is being established at Los Angeles. The new plant, expected to begin production in April, will be Owens-Illinois' fifth for the manufacture of the new plastic container.

"Establishment of the new plant was made necessary by the growing demand for the plastic bottle among West Coast producers," Carl R. Megowen, president of Owens-Illinois, said. Western packagers previously have been supplied by O-I plants in the East.

The two-story plant will be supervised by William E. Cole. The building, constructed by Owens-Illinois a number of years ago, is adjacent to the company's Los Angeles glass container facility and was leased to another company until recently.

•

### *Murphy Named by Coty*

Coty, Inc., New York cologne and perfume marketer, has announced the appointment of John Murphy as director of market research. He was formerly with the Bristol-Myers Co. and J. Walter Thompson.

### Risdon Names Two Vice-Presidents

New Risdon officers announced in February (*Aerosol Age*, March, Page 58) include Lewis A. Dibble, Jr., left, executive vice-president; and Edward Noyack, vice-president and member of the board of directors.


here is a
PRODUCT FILLER
which leading
AEROSOL PAINT PACKAGERS
have been using with
outstanding success

Simply set dial to desired fill for long or short runs
- available in single or multiple spigots
- high or low viscosity products
- adjusts to different heights
- stainless steel housing

MANUAL & AUTOMATIC
FILLING EQUIPMENT
BUILT TO SPECIFICATIONS

the simplicity of
the design of this
PELLET DISPENSER
means long, trouble-free
service

- completely automatic
- dispenses two steel balls or one glass marble & is adjustable to various sizes of either
- easily adapted to your line
- stainless steel housing
- approx. size: 12" l. x 8" w. x 8½" d.

**Jet SPECIALTY CO.**
2800 SOUTH PARK
CHICAGO 16, ILLINOIS

### FTC Warns on Extinguishers

The Federal Trade Commission has issued an order prohibiting fake claims for fire extinguishers containing only fluorinated hydrocarbons as the extinguishing chemical. Claims of "Safe," "Non-Toxic," and "Stops every kind of fire" were found objectionable. The FTC claims that subsurface or deep-seated fires in common materials cannot be put out by using such extinguishers.

The new FTC order is the culmination of a number of censures to producers of fire extinguishers in connection with such claims for fluorinated hydrocarbons. Allchem Manufacturing Co., New York, was cited by the FTC for such claims last year.

Also last year a report appeared (in the "Aerosol Bulletin" of the Federation of European Aerosol Associations) giving details of a case of lethal oedema of the lungs attributed to breakdown of fluorinated hydrocarbons to phosgene in the presence of heat. In July of 1959 the *Journal of the British Fire Protection Association* cautioned against the toxicity of aerosol fire extinguishers and against their fire-fighting efficiency (*Aerosol Age*, December, page 96).

•

### Johnson Names Fitzgerald

Thomas L. Fitzgerald has been named field sales manager for the Service Products Division of S. C. Johnson & Son, Inc., Racine, Wis. He will direct sales of Johnson's maintenance, industrial, and agricultural products. In addition, he will supervise training and development of service products sales personnel in eight districts throughout the country.

Mr. Fitzgerald joined Johnson in 1948 as a maintenance products salesman. Prior to his new assignment he was service products sales manager for the Southeast district, with offices in Atlanta. He is a graduate of Wake Forest College.

### Evans Research Names VP's

The election of two new vice-presidents, Dr. Murray Berdick and Dr. William E. Holland, has been

Holland Berdick

announced by Evans Research and Development Corp., New York independent research laboratory.

Dr. Berdick, who will take over administrative responsibilities for the laboratory of 60 scientists, joined Evans Research in 1946 as a project leader, and has been coordinator of research since 1953. A graduate of The George Washington University, he received his M.S. and Ph.D. from the Polytechnic Institute of Brooklyn, where he studied in the Institute of Polymer Research, and was a National Science Foundation Fellow and an Eli Lilly Fellow. Before coming to Evans Research, he was at General Electric Company and at the National Bureau of Standards. He is past chairman of the New York Chapter of the American Institute of Chemists.

Dr. Holland, who will take over the responsibility for client liaison and contract administration, joined Evans Research in 1955 as development manager. Prior to this, he was manager of market development of the Plastics Division of the Celanese Corp. of America. His industrial research background also includes managerial activities at Behr-Manning Corp., Sun Chemical Co. and Industrial Tape Corp. He is a graduate of Indiana University, and received his M.S. from Brown University and his Ph.D. from the University of Illinois.

•

### Scandia Appoints Potter

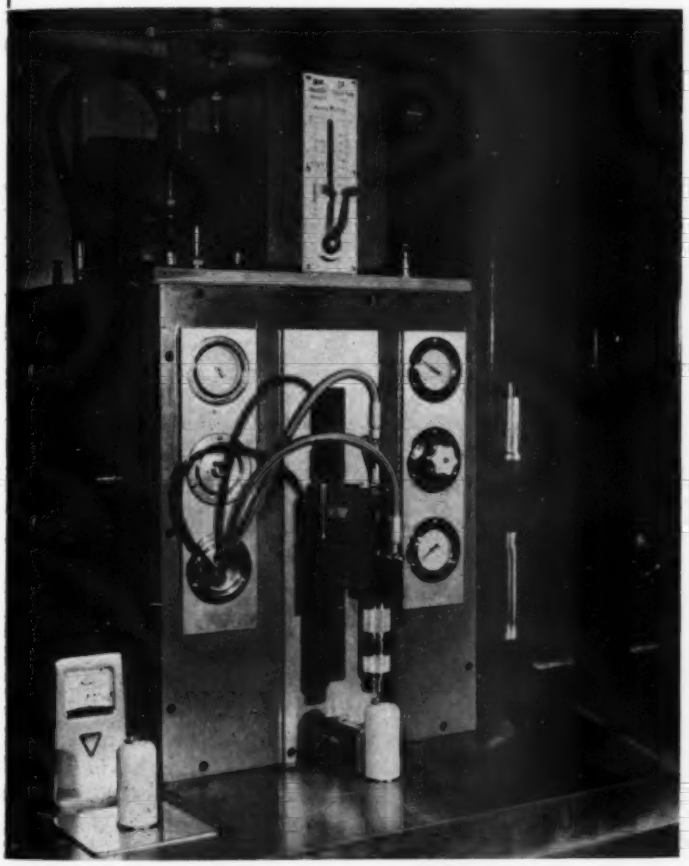
James S. Potter, Jr., formerly of Millot, Inc., has been appointed general sales manager for Scandia Cosmetics and Tuvache Perfumes, both of New York.

*Druk Pak Announces New Models!*

*Europe's Most Advanced*

# AEROSOL PRESSURE FILLING EQUIPMENT

For all production requirements (small, medium, large)



- Fully automatic — up to 40 units per minute.
- Semi-automatic single machines — up to 30 units per minute (product filler, valve clincher, propellant charger).
- All equipment is fully pneumatically operated. No electrical controls or connections. The ultimate in safety.

Also offered are all auxiliaries, propellant pumps, accumulators, purgers, unscrambler tables, conveyor tracks, coders, tank type or fully automatic magnetic chain link belt test baths for semi-automatic or fully automatic lines.

**Exhibiting at "Interpack" Fair, Dusseldorf, Germany, April 20-27, 1960.**

**Our production machines and laboratory units are in world-wide operation.**

*For catalogues and prices write:*

**Manufacturer —**
**Johann Waldherr, O.H.G.**
**162, Kaefertalerstrasse**
**Mannheim, Germany**

**Sales Representative —**
**Druk-Pak Inc.**
**36, Merkurstrasse**
**Zurich 7/32, Switzerland**

# CSMA Lists Program Details for May Meeting in Chicago

AN entire session devoted to "Pharmaceutical Aerosols" will be the major program highlight of the 46th mid-year meeting of the Chemical Specialties Manufacturers Association at Chicago's Hotel Drake May 16-18. Speakers at the session will include technical research personnel from three of the leading pharmaceutical marketers, as well as a talk by a well-known university professor, a custom filler, and a propellant supplier.

Although the CSMA's program committee emphasizes that the announced program is still a tentative one, subject to change of speakers and subjects by the middle of next month, the May 17 Pharmaceutical Session already gives evidence of being the most formidable such program (on pharmaceutical aerosols) ever heard anywhere. The list of papers already includes:

*Sterile Filling*, by Carl Stern (American Cyanamid Co.)

*Package Development of Pharmaceutical Aerosols*, by John Graham (Schering Corp.)

*Aerosol Inhalation Therapy*, by Dr. John Sciarra (St. John's University)

*Problems of Filling Pharmaceutical Aerosols*, by an as yet unannounced speaker from Stalfort Pressure-Pak.

*Market Potential for Pharmaceutical Aerosols*, by a representative of the Market Surveys Dept. of General Chemical Division of Allied Chemical Corp.

The pharmaceutical session is one of two scheduled for the Aerosol Division of the CSMA. The highlight of the Wednesday meeting of the Aerosol Division will be the "Annual Aerosol Product Survey", given this year by E. E. Husted (Union Carbide) chairman of the Aerosol Product Survey Committee. The 1958 survey, given at the 45th meeting of the CSMA, provided an anticlimax because for the first time it showed totals *under* those of the previous year. This was attributed to the fact that a number of major fillers and marketers reporting the previous year, didn't report their totals last year.

Other papers at the Wednesday session include a report on "Safe Use of Hydrocarbon Propellants" (by a representative of Peterson Filling), "Powdered Aerosols" (Union Carbide), and "A New Aerosol Corrosion Study", (by P. A. Sanders of DuPont's "Freon" Products Division). ★

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### Laurence Kiefer Dies

Laurence Kiefer, executive vice president of the National Paint, Varnish, and Lacquer Association died last month at the age of 55. He began his career in 1926 with the H. A. Gardner Laboratories of the Institute of Paint and Varnish Research.

•

### Longfellow Joins Mennen Co.

Dr. John M. Longfellow, formerly with Colgate-Palmolive's research and development division, has been named director of research and development for The Mennen Co., Morristown, N. J. His primary responsibility will be the coordination of Mennen's overall research and development operation under the recently expanded marketing program. Dr. Longfellow will serve on Mennen's Product Development Committee.

A graduate of Northwestern University at Evanston, Illinois, Dr. Longfellow holds a Ph.D. in organic chemistry. He is a member of the American Chemical Society and the Association for the Advancement of Science. He is chairman of the New York Chapter of the Society of Cosmetic Chemists.


PRODUCTS THAT WORK BEST DEPEND ON ACTION

Manufacturers with the out-in-front products specify ACTION PLASTICS dip tubing more than any other brand. The reason is obvious to anyone who has experienced our consistently reliable performance.

We make more than 150 different tube types . . . in varying diameters, wall thicknesses or formulations.

*Write for free samples and recommendations.*

DIP TUBING FOR
AEROSOLS
ATOMIZERS
SQUEEZE BOTTLES
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GARDEN SPRAYS

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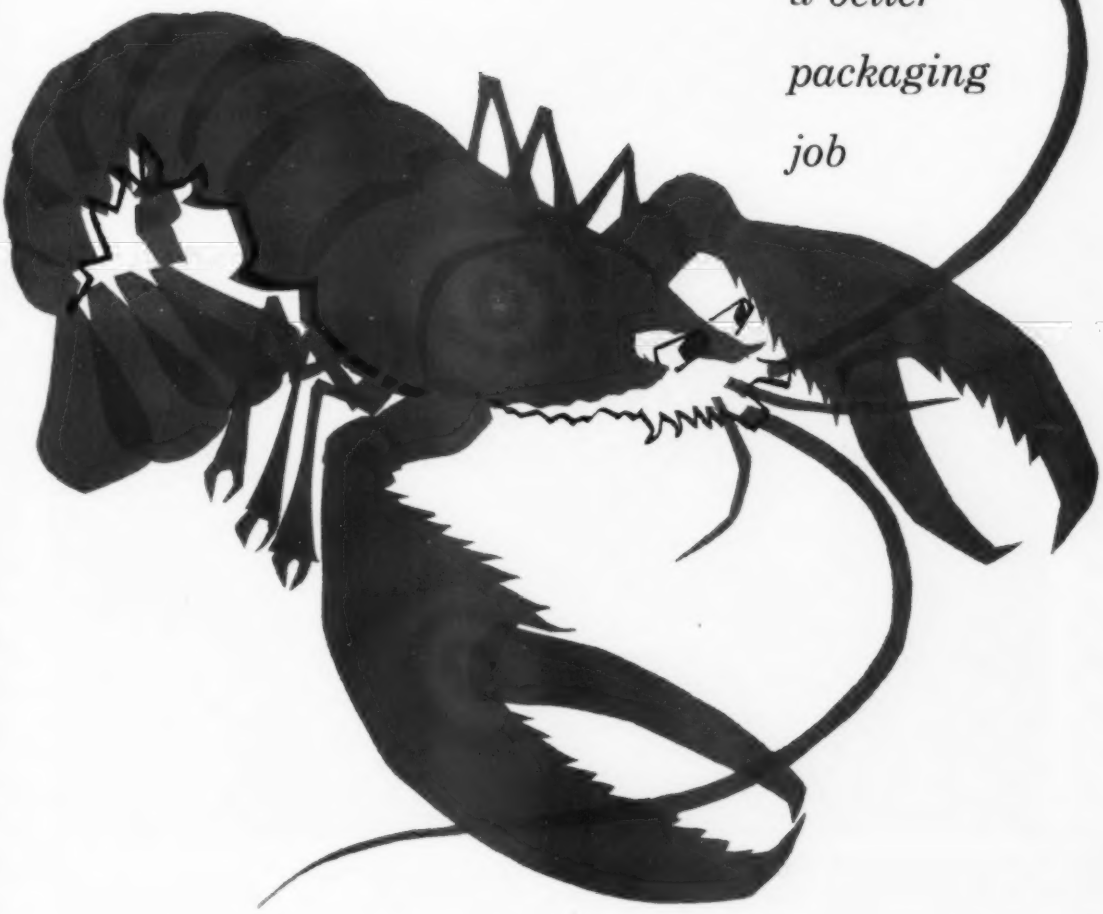
*Subsidiary of Colorite Plastics of New Jersey, Inc.*

*only*
*mother*
*nature*
*does*
*a better*
*packaging*
*job*

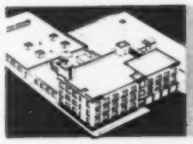


Because we have always maintained the strictest standards of quality in the industry, G. Barr & Company customers have seen *hundreds of millions* of private label aerosol packages bearing their product names, reach the hands of consumers, perfectly formulated . . . perfectly packaged. Only Mother Nature does a better job!

Today—with more than 5 acres devoted exclusively to custom formulation and filling of aerosols, you can be certain that when G. Barr & Company manufactures your aerosol product, you will receive the finest, most versatile, most efficient and economical service available. If Mother Nature doesn't do YOUR packaging, call on us.

**G. BARR & COMPANY**

*PRIVATE LABEL AEROSOLS*



**ACRES OF AEROSOL PACKAGING FACILITIES**

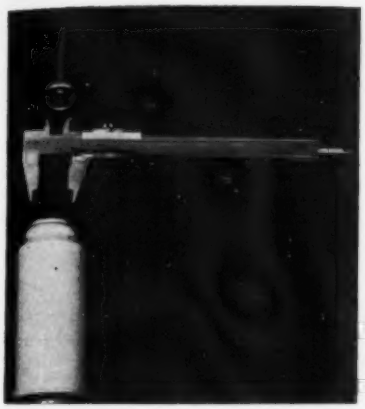
General Offices: 3601 S. Racine Ave.
Chicago 9, Ill.

# ANOTHER FAMOUS 40&8

**THE NEW KLM DC-8 JET CARGO SERVICE.** The original "40&8" was a French boxcar during World War I. The boys in the A.E.F. knew it as their Pullman to the front. After that ride, it was all on foot, through the mud to the trenches. The "40&8" took its name from the load capacity stencilled on its side . . . 40 Hommes & 8 Chevaux . . . 40 Men & 8 Horses. It was and is the most famous boxcar in history. But now, KLM whose own history dates from World War I, introduces another "40&8," destined to be just as famous in its own right. On its 40th Anniversary, KLM introduces its new DC-8 Jet Cargo Service, soon ready to carry your products to the selling fronts the world over. It will deliver your shipments in a few hours or overnight to any market on the globe. It will reduce your inventory and handling costs, open up vast marketing areas to increase your profits. For more information on the new KLM "40&8," contact your freight forwarder, cargo agent or KLM, 609 Fifth Avenue, New York 17, N. Y. — PLaza 9-2400.

THE WORLD OVER
KLM
ROYAL DUTCH AIRLINES
THE WORLD'S FIRST AIRLINE

## Aerosol Caliper Device



A modified design of the Vernier caliper has been developed for the aerosol industry. Micrometric measurements of all the essential parts of the container and their dimensions are possible with this new instrument. Cap and valve diameters; crimp depth; inside diameter; outside diameter; container height (to 6"); aperture; cap roll; and most all the dimensions subject to quality control are accessible and measurable to 0.001". The tool may also be used in transferring and checking machine and equipment settings to the same tolerance.

This design modification was originated by DeGray Design, Inc. of 900-25th St., West Palm Beach, Fla. and is distributed on an exclusive basis by that company. Made of hardened stainless steel and in a protective wooden case, it is manufactured in Switzerland by the Lufkin Rule Co.

•

### Test Animal Cage Cleaner

A stainless steel laboratory cage washer developed to automatically clean and sterilize cages used for housing laboratory test animals has been developed by the Ransohoff Co., Hamilton, Ohio.

Designed for use in biological laboratories, the machine washes the cages, drains, then subjects the cages to a "walking" sterilizing steam spray. The cages are given a one-minute recirculated wash followed by a 30-second hot lime rinse. Utilizing this time cycle, machine capacity is 40 cages per hour.

# Equipment–Processes–Bulletins–

## New Aerosol Pellet Dropper and Filler Developed

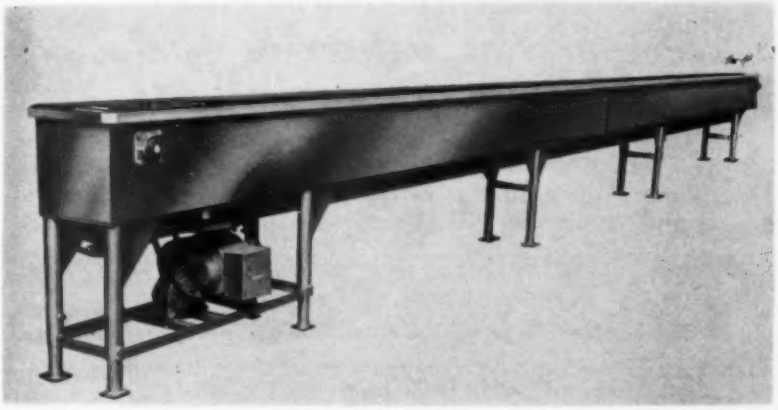
Jet Specialty Co., Chicago, has developed a new pellet dropper for aerosol paint production (left) as an addition to its line of two-spigot fillers (right). Filler operates at speeds of 60 16-ounce cans per minute. (Photo in Illinois Bronze Powder Co. plant).

### Peerless Container Booklet

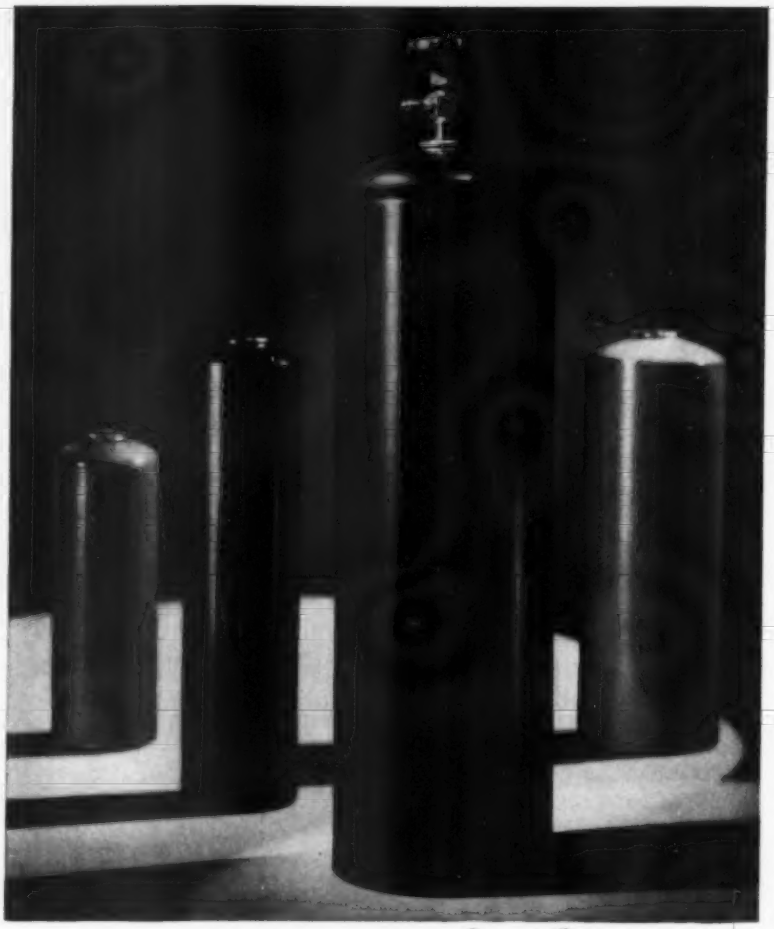
Peerless Tube Co., Bloomfield, N. J., has just published an eight-page catalogue on its Peerasol aluminum aerosol containers. Of extruded, one-piece, seamless construction, they come in sizes up to four ounces and reportedly have found wide use in drug, pharmaceutical, cosmetic and chemical specialty product packaging.

The catalogue lists the 10 sizes, ranging from one-half to four fluid ounces, and describes the inside resin coatings and exterior finishes available. Decorated containers are produced in one to four-color lithography over a base coat and can be further coated with a highly resistant lacquer for protection against alkalies or acids.

## Hot Water Test Tanks Being Exported



J. G. Machine Works, Inc., New York, last month completed shipment of the first of its new 30-foot stainless steel water test baths. Units are equipped with vari-speed drive and are shipped in two sections. First unit went to Canmex, S. A., new Mexico City aerosol filling company. JG also supplies filling machines and other aerosol auxiliary equipment.



Here it is!

NEW

SUPER KING SIZE

Disposable Container

*Another* TMC FIRST *to help you sell more of your products*

This NEW 10-Pound water capacity cylinder now gives you four TMC KING SIZE Disposable Containers to market your products in bigger volume . . . other sizes include 2, 3 and 5-pound water capacity . . .

FOR WORKING PRESSURES
UP TO 240 psi – ICC APPROVED

*WRITE, phone or wire for price information—give quantity and deliveries required—ask for helpful Selection Guide No. DC-559*

TUBE MANIFOLD
CORPORATION
419 BRYANT STREET • N. TONAWANDA, N. Y.

### *Quick Foam Bulletin*

A new bulletin describing basic formulations involving its new "quick-breaking foam" development has been issued by the "Genetron" Dept., of the General Chemical Division of Allied Chemical Corp., New York. The aerosol foam formulations described in the bulletin confine themselves to a limited area as dispensed, and then break into a liquid when disturbed. Products visualized to lend themselves to such formulations include hair dressing, sun screen, nail polish remover, cold wave lotions, and after shave lotions. Sample formulations for each of these products are included in the bulletin.

•

### *Aerosol Sampling Booklet*

"Sampling Microbiological Aerosols" is a new booklet issued by the Division of Public Documents, U. S. Government Printing Office, Washington 25, D. C. Called Catalog No. FS 2.62:60, the 53-page booklet costs 45 cents. It discusses air sampling methods, particle sizing, selection of samplers and operation methods, and describes samplers and equipment for air analysis.

•

### *Visible Level Tank Gauge*

A visible liquid-level gauge for reading inventory and controlling batching amounts is now available on reinforced plastic tanks made by Jones & Hunt, Inc., Gloucester, Mass. Any liquid level is seen through the translucent tank walls and the volume unmistakably read on a calibrated gauge running the height of the tank. Overfillings due to faulty readings are eliminated. Tanks with gauges, suitable for any liquid including corrosives or distilled water, are available in standard sizes. A bulletin with prices is available from the company at Adelaide Rd., Gloucester.

•

### *Offers New Aerosol Scent*

"Lavalia," a new lavender fragrance with possible aerosol applications, has been developed by Aromatic Products, Inc., 235 Fourth Ave., New York. Suggested percentage for aerosol formulations is ¼ to ½ of 1%.

### *Stronger Can Side Seam*

Continental Can Co., New York, has developed the "Tricon" solder aerosol can which is said to have greater side seam bond stability and to hold higher pressures (at elevated storage temperatures) for longer periods than the conventional soldered three-piece can now in use. To the aerosol industry the development is said to mean better protection and longer life for most aerosol products.

Since the introduction of the aerosol can, the conventional soldering method was used on all three-piece cans. This two-component soldering system somewhat limited the selection of propellant mixtures to those which could be tolerated by the can structure. Continental's development has fortified the conventional bi-metallic soldering system into a three-component one. After three years of investigation and research involving controlled storage studies with various products, the company declared that this new aerosol container shows superior shelf life performance over other three-piece packages.

A company spokesman said: "This important packaging development should help pave the way for further growth and expansion in the aerosol industry since it makes possible applications previously considered impossible because of the pressure restrictions imposed on the propellant system selection. Continental, which developed the original three-piece low pressure aerosol can which started the aerosol revolution, makes aerosol cans ranging from three to 16 ounces capacity for products of varying physical and chemical properties. The new "Tricom" aerosol can will be made in the full range of styles and sizes and will be offered for all products requiring the added benefits of the new container."

•

### *Labeling Law Guide*

Revision No. 1 of "Compilation of Labeling Laws and Regulations for Hazardous Substances" has just been published by the Chemical Specialties Manufacturers Association, 50 E. 41st Street, New York 17. The 25-page addition to the original copy contains new laws and regulations to Spetember, 1959. Each member company will receive one copy free. Extra copies are $2.00, and the charge for non-members is $3.00. Complete copies, including the basic copy and Revision No. 1, are $5.00 to members and $7.00 to non-members. Prices are postpaid in United States and Canada; elsewhere, postage extra.

•

### *British Veterinary Products*

Walter Gregory & Co., Ltd., Wellington (Soms.), England, a leading marketer of aerosol veterinary products, has just introduced five new products. Included are a transparent antiseptic plastic dressing containing fly repellents, a pressure-dispensed vitamin syrup intended for young stock animals, an anti-feather pecking spray, and two aerosols for combating respiratory diseases in poultry.

### *Offer Lanolin in Pellets*

Croda, Inc., 15 East 26th Street, New York 10, last month announced the availability of "Hartolan" and "Super Hartolan" lanolin alcohols in one-inch pellets especially suited for aerosol formulation. These materials had hitherto been available only in 100-pound blocks.

Both materials are 100% concentrated, pure natural wax, and are said to be non-greasy, non-rancid, stable at high or low pH, non water miscible, and to possess a low odor level. In aerosol formulations they have found use in emulsion stabilization, and to aid in formation of a non-sticky occulusive film-forming agent on the skin and hair (to prevent loss of moisture). In aerosol foam products, including shave creams, they are said to impart a "wet feel" to the foam product.

On the aerosol production line, the pellets may be dropped either by hand or automatically into the cans.

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manufacturer of
AEROSOL LABORATORY and PRODUCTION EQUIPMENT
• Complete Aerosol Laboratory
• Hand Operated Can Crimper
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• Oven for Shelf Life Ttests
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• Laboratory Cold Filler & Deep Freeze
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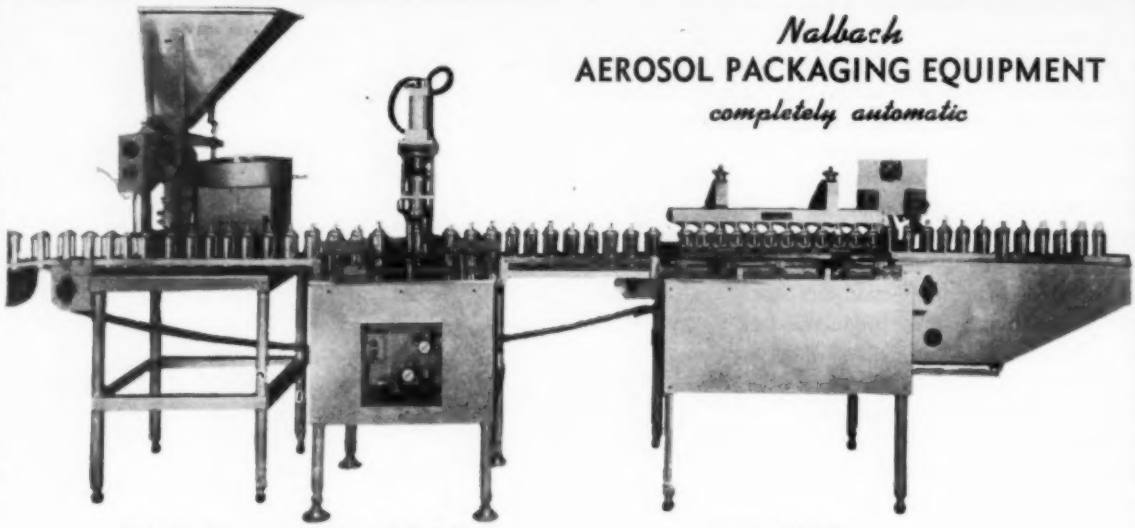

Valve Feeder | Crimper and Code Dater (Mod. 1-HAC) | Gasser and Shaker (Mod. 12G.S.)

***THE CRIMPER:***

- Crimps and codes simultaneously
- Features a cap-and-valve centering device
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***THE GASSER AND SHAKER:***

- Gasses 12 containers simultaneously
- Adjustable to line speed, shake, time, and height changes.

**These are but a few of the excellent features engineered into this equipment. Available as a unit or as separate components.**

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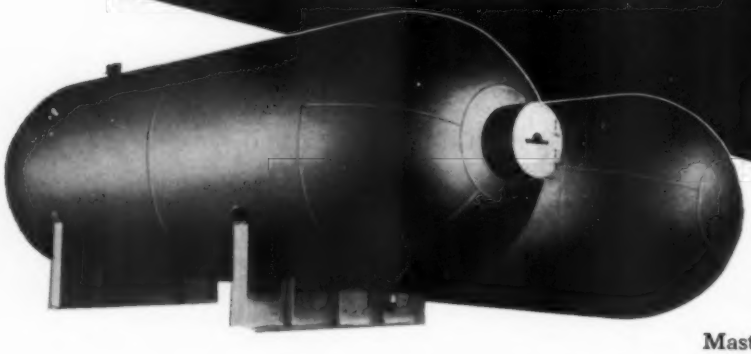

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### Miller to ConCan Post

Dr. James F. Miller has been appointed laboratory director of general chemistry at the Central Research and Engineering Division of Continental Can Co., Chicago. Thoroughly experienced in the fields of analytical chemistry and instrumentation, he was formerly with the Mellon Institute where he was a senior fellow on a series of fellowships, one of which involved a study of the properties and behavior of insecticide dusts and emulsions.

Dr. Miller received his B.S. from Franklin and Marshall College and his M.S. and Ph.D. degrees from Pennsylvania State University, where he majored in analytical chemistry.

•

### Lilly Loses N. J. FT Case

A company not registered as a New Jersey corporation cannot legally enforce Fair Trade agreements in that state, the New Jersey State Supreme Court ruled on March 7. In a case brought to the court by Eli Lilly & Co., Indianapolis drug marketer, Lilly sought an injunction to stop Sav-On-Drugs, Inc., Plainfield, from selling its products below fair trade prices.

In a 6-to-1 vote, the Supreme Court adopted a Superior Court ruling denying the Lilly injunction. The state held that Lilly is not registered as a New Jersey corporation—and thus escaped paying state corporation taxes. The company contended that it does not conduct business in New Jersey and argued the registration law was unconstitutional if it would bar Lilly from enforcing fair trade agreements. In defending itself against the injunction, Sav-On-Drugs pointed out that Lilly has 18 detail men working in New Jersey.

The March 7 Supreme Court ruling, in effect, endorsed the opinion of former Superior Court Judge Everett M. Scherer, who ruled that a corporation which does not file in New Jersey "should not be permitted to take advantage of the laws of this state which promote its business, such as the Fair Trade Act."

The decision is viewed by fair trade backers as a major blow to the concept of fair trade in New Jersey, since the majority of major cosmetic, pharmaceutical, paint and other such firms practicing fair-trade price control are headquartered (and registered) in states other than New Jersey.

•

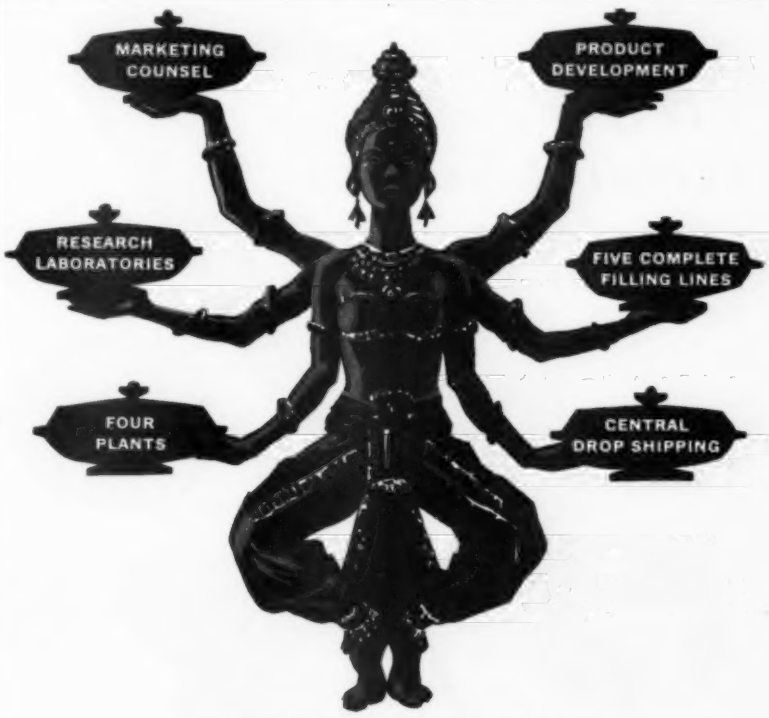
### Homer W. Jones Dies

Homer W. Jones, former head of the Development Division of the Linde Co., an affiliate of Union Carbide Corp., died last month.

### Revlon Appoints Kersh

Revlon, Inc., New York, last month announced the promotion of Henry Kersh from the position of director of operations in Revlon's International Division, to the office of the president, as special projects assistant.

Mr. Kersh has been with Revlon for 14 years having started in the Revlon laboratories and progressed through the organization in various executive capacities.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### *Colgate Appoints F. W. Olson*

The appointment of Frank W. Olson as a group leader in the Toilet Articles Division's Research and Development Department has been announced by the Colgate-Palmolive Co., New York. He will head the products formulation group of the hair products research section at the Colgate laboratories in Jersey City.

Mr. Olson joined Colgate's research and development staff in 1950, soon after he received his M. S. degree in chemistry from the University of Nebraska. He is a member of the Society of Cosmetic Chemists and the American Chemical Society.

•

### *Vander Linden Rexall VP*

Howard K. Vander Linden, former president of the Rexall Drug Co., Ltd. of Canada, has been named to the new post of vice president and general sales manager of the Rexall Drug Co., Los Angeles. He has been with the Rexall organization since 1947.


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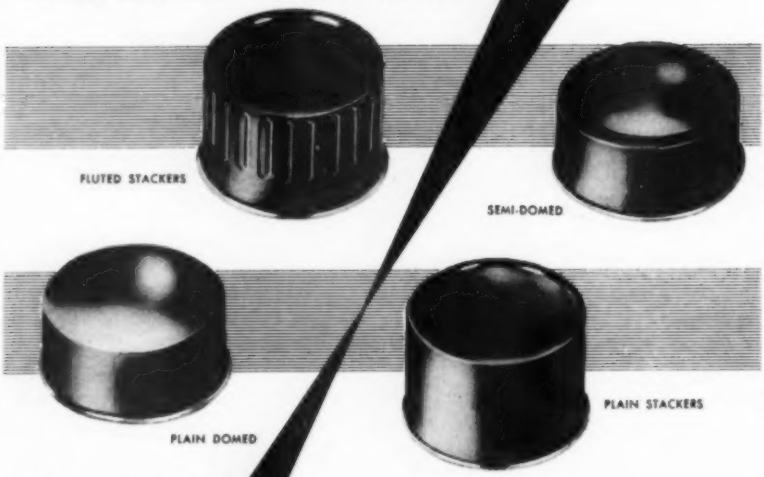
SUPERIOR SERVICE for the AEROSOL INDUSTRY

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### *German Marketer Visits U. S.*

Dr. Erich K. Wenzel (left) vice president and marketing director of Siegel-Werke, West German marketer of household cleaning products, last month completed a tour of U. S. household product firms and supermarket chains. In the photograph he is shown conferring with Marshall S. Lachner, president of B. T. Babbitt, Inc., New York. Mr. Wenzel's extensive tour, sponsored by the West German Association of Consumer Research, was designed to educate foreign business leaders about U. S. competition among nationally advertised brand marketers.

•

### *Chicago SCC to Hear Shelanski*

Dr. Morris V. Shelanski, director of the Industrial Biology Research and Testing Laboratories of Philadelphia, Inc., will be the guest speaker at the meeting of the Chicago Chapter of the Society of Cosmetic Chemists on April 12. He will speak on the general category of toxicological testing of cosmetic products, relating his remarks to current FDA rulings on this type of products.

The meeting will be held at 7 p.m., at Henrici's Restaurant in the Merchandise Mart, Chicago.

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### *Nels Gothard is Dead*

Nels Gothard, 66, retired chief chemist of Sinclair Refining Co., Chicago, died on Feb. 21. A former president of the Chemical Specialties Manufacturers Association, he joined Sinclair Refining in 1919, became chief chemist in 1950, and retired last year. He was a familiar figure at CSMA conventions.

### SCC to Honor Lerner

The 1960 Special Award of the Society of Cosmetic Chemists and its prize of $1,000 will be presented to Dr. Aaron Lerner in recognition of his work on enzymes and hormones controlling skin pigmentation. The eminent professor of the Yale University School of Medicine will be honored during the Society's Semi-Annual Meeting to be held May 12 at the Hotel Biltmore in New York.

Dr. Lerner is considered to be a pioneer in the study of Melanin and was instrumental in the isolation of two melanocyte stimulating hormones from hog pituitaries. His work also demonstrated the similarity of these hormones obtained from man to those obtained from other species.

Dr. Lerner completed both his undergraduate and graduate work at the University of Minnesota, where he received both his Ph.D. and M.D. degrees in 1945. He served as a Captain with the Army Medical Corps from 1946 to 1948 at the Army Chemical Center, Maryland, and conducted research with his collaborators on the biochemistry of melanin formation.

The Spring meeting of the Society of Cosmetic Chemists, which will feature the presentation of the Annual Award, will include papers on new, unpublished material discussing practical problems of the cosmetic chemists. Keynoting the program will be Dr. G. Robert Clark, an honorary member of the society, and director, Division of Cosmetics, Food & Drug Administration, Washington, D. C., who will outline current problems of concern to the Administration and the Industry. Scientific papers will include the following:

"The Assay of Lyopylized Placenta Extract" — Dr. William Colburn, Colburn Labts., Chicago, Illinois.

"Effects of Vehicle Components and Sebum Constituents on the Absorption Characteristics of Sun Screens" — Dr. Sydney Reigelman, College of Pharmacy, University of California, San Francisco, California.

"Molecular Forces in Permanent Waving" — Herman Bogaty, assoc. research director, The Toni Company, Chicago, Illinois.

"Non-Aqueous Foam Propulsion Systems" — David S. Tillotson, Pennsalt Chemicals, Chestnut Hill, Pa.

"The Use of Ternary Diagrams in Cosmetic Formulations" — R. James and R Goldemberg, Shulton, Inc., Clifton, N. J.

•

### Widen "Aeromagic" Distribution

"Aeromagic Push-Button Starch," which has been successfully test-marketed in New England and upstate New York areas for the past six months, is expanding its distribution. Dr. Winston H. Reed, president of General Aerosols, Inc., Shelton, Conn., manufacturer and marketer of the new instant aerosol starch, reports that consumer reaction and sales have been excellent.

These brokers already have been named to handle the product:

Buffalo, N. Y.—Frank L. Haveron & Co.; Syracuse, Conn.—Carl La Fleur Co.; Boston, Providence—McGoldrick-Joyce Co., Inc.; Philadelphia—Radler Rosso & Co.; Toronto, Ont., Canada—Philip Green & Co.

In addition, negotiations are in progress with brokers in foreign nations.

Pre-mixed in an eight-ounce can, the starch is released as a fine spray, applied directly on the garment to be ironed.

•

### B-M Names Reinhardt VP

Herman E. Reinhardt has been appointed vice president in charge of purchasing for the Boyle-Midway Division of American Home Products Corp.

Mr. Reinhardt has been associated with various divisions of American Home Products since 1929, when he poined the purchasing department of Wyeth Laboratories. His most recent position has been as general purchasing agent of American Home Products Corp.

•

### New British Container Co.

Monobloc Aerosols Ltd., a new company to manufacture and deal in all kinds of extruded containers, has been incorporated in London by W. R. Featherstone and O. A. Perry. Address given is 26 Hallam Street, London W. 1.

### Johnson Sets Italy Subsidiary

A subsidiary company has been established in Milan, Italy, by S. C. Johnson & Son, Inc., Racine, Wis. The new company, to be called S. C. Johnson & Son Italiana S. p. A., will manufacture Johnson products for sale throughout Italy. The Wisconsin company also has subsidiaries in 10 other countries.

Michael M. Burke has been elected managing director of the new firm, with H. F. Johnson of Racine serving as chairman. Mr. Johnson also is chairman of S. C. Johnson & Son, Inc. Participating in the direction of the new subsidiary are Amerigo Peretti of Milan, technical director of S.A.P.P.A., and Eric Hohenberg, managing director of Johnson's French subsidiary.

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### Velsicol Elects 3 VP's

The following appointments were announced last month by Velsicol Chemical Corp., Chicago:

John F. Kirk, vice-president since 1954 and a member of the board of directors since 1958, was named executive vice-president.

Bernard H. Lorant, previously assistant to the president in charge of research, was named vice-president in charge of research and was elected to the board of directors.

A. B. Chadwick was named vice-president in charge of manufacturing and engineering. He was formerly director of manufacturing and engineering.

•

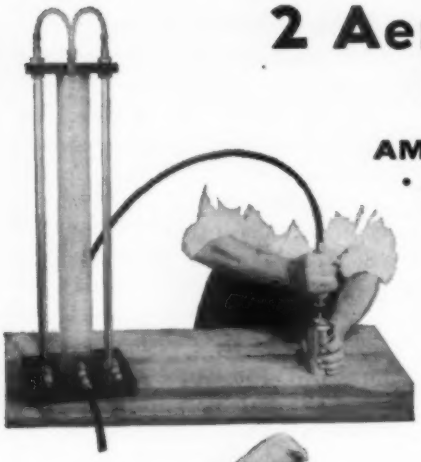
### Mintzer and Cohn Honored

Election of Harvey Mintzer and Robert Cohn to Sigma Xi, national honorary research society, on the basis of their work on aerosol particle size measurement has been announced

Mr. Mintzer, now a research chemist at Aerosol Techniques, Inc., Bridgeport, Conn., and Mr. Cohn were honored by Simga Xi on the basis of work done as graduate students in the aerosol laboratory at the College of Pharmacy at Columbia University in New York. Their research was under the direction of Dr. Joseph Kanig of the college faculty.

# 2 Aerosol Production Boosters

## FOR SMALL LOT AND LABORATORY WORK



### AMCO PRESSURE BURETTE

- All operating control valves conveniently located at table height on base of Pressure Burette.
- Hand operated injector valve with easily changed adapters for use with most of the popular makes of aerosol valves.
- Shatter-proof clear plastic shield that encloses Burette tube, provides maximum protection for operator.
- 1000 cc capacity.
- Compact . . . total height is 30".
- Calibrated in 5 cc graduations.
- Heavy, solid aluminum base prevents toppling.
- Available for use with nitrogen at slight extra cost.

### AMCO HAND CRIMPER

- Manually operated, short stroke, and multiplied leverage lessen operator fatigue.
- Single stroke action locates can, seats valve in position, and crimps.
- Keyway guided head keeps crimper jaws centrally aligned for all can heights.
- Completely enclosed for safety . . . no moving parts exposed.
- Light, compact, durable unit weighs 16 lbs.

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- Cartons of bottles, jars, cans or containers are inverted to the tilt top table and their contents pushed onto the revolving disc. Units are *automatically regimented and despatched in single file* to the conveyor.

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## New at the aerosol game?

**a subscription to *Aerosol Age*, the magazine of pressurized packaging, will keep you informed about technical developments, general news, new patents and trademarks, and other items of interest about this most exciting facet of the packaging field.**

### Carsch to Roure-Dupont

Roure Dupont, Inc., New York producer of essential oils and aromatic chemicals, has appointed Gustav Carsch as technical service director, a new position created to strengthen the co-operation between clients' research & development and Roure Dupont's laboratories.

Mr. Carsch has previously been chief-perfumer of The Toni Co., chief-perfumer of Lanolin Plus Inc., and branch manager of Polak & Schwarz Inc. in Chicago where he also served as chairman of the Society of Cosmetic Chemists.

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### Canco Names Two VP's

The Canco Division of American Can Co., New York, has announced the appointment of new vice-presidents in its Industrial Relations and Purchasing Departments.

Darrell F. Brown has been named vice president of the Canco Division's Industrial Relations Department. E. T. Klassen will continue as vice-president of the Corporate Industrial Relations Department.

Harold R. Larsen has been appointed vice-president of the Purchasing Department of the Canco Division. A. O. Degling will continue to function as corporate vice-president of purchases.

Mr. Brown joined the company in 1935 as a machine operator and since that time has held various positions in the division's personnel and industrial relations departments and, most recently, was manager of union relations for the Canco Division.

Mr. Larsen began his career with the company in 1928 as an inspector in one of the division's Chicago plants. Since 1930 he has been associated closely with the tin plate purchasing requirements for the division. His most recent assignment was as general manager of the division's Purchasing Department.

•

### Toni Warns of FT Stand

Active enforcement of fair trade will be continued by Toni during 1960 in all states having fair trade laws, Stuart K. Hensley, president of The Toni Co., Chicago, stated last month.

Reporting on activities in 1959, Mr. Hensley said that 32 permanent injunctions were obtained against retailers in various states enjoining the sale of Toni products at less than fair trade minimum prices. These injunctions are in addition to numerous injunctions obtained in prior years, he added.

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### Miller Addresses Drug Group

Dr. Lloyd Miller, director of Pharmacopoeial Revision, was the featured speaker at the Feb. 16 meeting of the Society of Pharmacists in Industry. He revealed that the new U.S.P. will be ready for distribution early this month, and that it will contain 908 monographs. The new revision is being compiled by 60 experts, of whom 20 are physicians and 40 are qualified experts in allied sciences. The U.S.P. is revised every five years.

## Spontaneous Purchases

(*From Page* 30)

account for slightly more than one-half. In the survey, unplanned purchases were coupled with other store decisions—those purchases planned in a general way at home (but not by brand until arrival at the store) and those substituted for another brand at the store. In drug and toiletry, dairy products, and household needs (currently, the three product categories in which the most aerosols occur in supermarkets) the combined total of unplanned and store purchases was 70% or more.

This trend toward unplanned purchases, according to H. D. Chickering, manager of packaging sales for the DuPont Film Department, "underscores the importance of more aggressive selling, better in-store promotions, and improved packaging. These factors have great influence on the shopper's decisions inside the store, and they become increasingly important as competition for her super market dollar grows keener every day."

AEROFLEX® "P" DIP TUBES

- QUALITY CONTROLLED—Every shipment laboratory tested for crack resistance.
- Ideal for aerosols, atomizers, squeeze bottles and lotion pumps.
- Odorless, non-toxic, resistant to most filler and propellant chemicals, crack resistant through ANCHOR's exclusive formulation of polyethylene.
- Close tolerances maintained. Precision cut and stack packed tubes available.
- Nylon dip tubes extruded for special applications.
- ANCHOR also extrudes in all of the newest materials—polycarbonate, polypropylene, and rigid polyvinyl chloride . . . offering reliable service and on-time deliveries.

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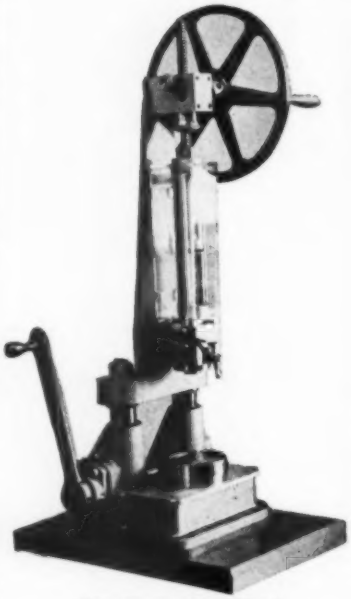

Foresman Liquified Gas Manipulator

**Cont. Filling Corp. Clinch Torque Meter**

Liquified Gas Manipulator w/Universal Head
Propellant Manifold for Manipulator
Hand Operated Vial Capper
Change Parts for Vial Capper
One inch opening Can Closing Press
Hydrostatic Test Units
Karl Fischer Pressure Titration Cells
Dead Stop Indicator for Karl Fischer Titrameter
Density Units
High Pressure Test Bombs
Can Sampling Units—Piercing or Valve Actuating
Pressure Gauging Unit—Pressure Balance or Water Filled
Test Ovens—Standard or Custom Built
Instantaneous Chiller Units—Mechanically Refrigerated
Electric Hot Water Test Bath
Hot Water Bath Transfer Baskets Safety Top Tank Racks
Table Tank Rack Combinations
Safety Screen Tubes for Glass Pressure Tubes
Plastic Protective Screens
Gloves and Masks

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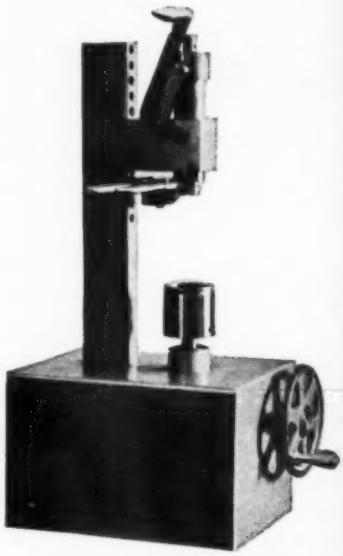


Foresman Hand Operated Vial Capper

## Cover Caps

Dome

Plain & Fluted Stacker

New Overall FLATTOP

*Samples Upon Request*

Eastern Cap & Closure Co.
725 N. Haven St., Baltimore, Md.

***An advertisement in* Aerosol Age *is the surest way yet of reaching everyone of importance in the pressurized packaging industry.***

The study was based on interviews with more than 4,600 family shoppers in 225 supermarkets across the nation. A total of 63,795 purchases was recorded by Alderson Associates, Inc., and then analyzed for industry significance by DuPont merchandising researchers. Copies of the survey are available by writing Dept. BH, Film Department, DuPont, Wilmington 98, Del.★

## Consultant's Corner

(*From Page* 60)

class) must contain less than 10 ppm in the shipping container.

Determination of the water content of an aerosol can be done in a number of ways. The two most common ways are with a continuous electrolytic sampler (which operates on a true conductance principle) and with the Karl Fischer Titration. Generally, the Karl Fischer method is preferred. The continuous conductance apparatus is expensive, hard to clean, sensitive to contamination, and readily rendered inaccurate by certain active ingredients.

The Karl Fischer Method consists of titrating the sample with a standardized pyridine, iodine, methanol, sulphur dioxide solution using an electrometric endpoint indicator. The method is subject to a considerable amount of operator variation and technique is a prime requisite for good results.

The titration cell should be modified for aerosol use. The cell should allow for maintenance of positive pressure at all times, and should also allow for introduction of the material to be titrated under the surface of the liquid already in the cell. A glass or polyethylene sparger disperses the material so that it is stirred more effectively in less time. Connections between the can to be sampled and the sparger should not be broken once a series of determinations is started.

Preferably, the indicator circuit should be of the dead stop type. Various indicating methods can be used, including the cathode ray winking eye. However, it has been my experience that a microammeter indicator allows more precise and "relaxed" determination of the end point when either forward or back titration technique is used.

The Karl Fischer reaction is involved enough so that serious inaccuracies can develop when complex systems are titrated. For this reason other methods have been tried. So far no improvement has been reported and for the moment no other test is in general use.

The problem of water in aerosols has always been considered to be important, but strangely enough no really comprehensive study of acceptable levels for various class type products has been carried out. Although such a study would be expensive and time consuming, an accumulation of such data would be of real value to our industry.★

## Nitrogen Gassing

(*From Page* 46)

unit to the gasser in one second, and the gasser requires 0.5 seconds to gas, the cycle is completed in 1.5 seconds—yielding a production of 40 units per minute. The flexibility of such a system is limited only to the point where high speed gassing becomes detrimental to the aerosol valve itself, and to the indexing speeds.

Figure 4 is a diagram of such a system without the embellishments of indexing mechanisms, timer-disc actuator, etc. The simple circuitry on the 110 V line illustrates the much desired "no can, no fill" characteristic. Hydraulic power at 250 psi was employed in the system because a main hydraulic source was employed in the entire processing line for conveyors, filler, crimper, gasser, indexing unit, and feeders.

*Conclusion:* As previously stated, nitrogen filling by equilibrium versus "pressure clipping" is a matter of economics. Where high production is required, "pressure clipping" equipment would require less capital

outlay than the conventional rotary type fillers. The major advantages are that such equipment requires much less floor space, is easy to maintain, sanitary, and attractive in appearance.★

## Supermarket Trends

(*From Page* 58)

they be able to absorb these new items? Operators say they will—and it will be done by means of freeing shelf space through more scientific space management, more realistic facing of merchandise."

He said that the goal of how to induce the consumer to spend more of her total budget in the nation's food stores can be achieved "primarily through new concepts of in-store merchandising—concepts developed by manufacturers, distributors, and by retailers—and based on more intensive, more realistic merchandising research. These are some of the things that retailers will look to and experiment with in the pursuit of their goal—what lines to handle, how much variety in a line, how to absorb new items, when to drop old items, how to face merchandise, group it, position it, how to pull more traffic into and through the grocery department, how to price promotionally, how to develop better special display methods and plans. How to give each department, each category sharper identification, quicker recognition, how to lend excitement to a store, how to develop customer loyalty needed to counteract the natural attrition in sales that comes with advancing store age."★

•

### Lanolin Plus Names Two

Lanolin Plus, Inc., Chicago cosmetics marketer, has appointed David W. Black, executive vice president and David Garlen director of research.

## A Bit of Discretion

(*From Page* 23)

have been given the business in the first place.

Too often the company management purchasing an aerosol line will be convinced that this initial expenditure will be enough to at least "get into" aerosol production. But with installation of even a modest line will soon come such important (and costly) considerations as what to do about bulk propellant storage, component and finished product warehousing, shipping, accounting, etc. The initial cost of equipment installation may be doubled or even tripled by the necessity to expand plant space, add to the technical staff, add to the laboratory, and so forth.

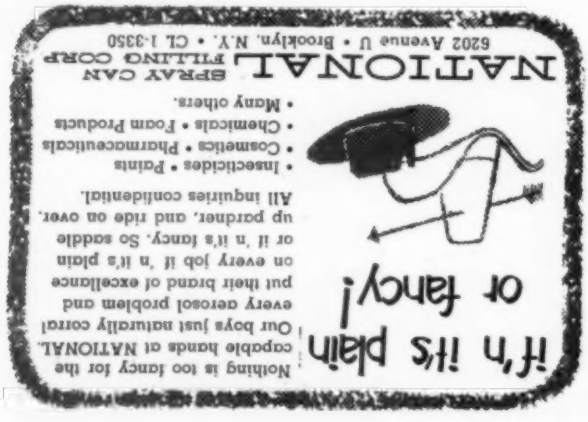
For all these reasons it would seem essential that every company should have some kind of aerosol "grounding" prior to attempting its own aerosol production. Either product development and early production should be entrusted to a reputable custom filler, or extensive laboratory work on product development and shelf-testing within the marketer's own laboratory should precede any significant equipment expenditure. Attempts at circumventing either of these requirements is an invitation to the countless headaches and unnecessary hardship suffered by less prudent aerosol marketers.★

## The "Qwip" Story

(*From Page* 25)

nel. To screen their eyes from the rays, line personnel must wear protective goggles. Also, their shoes and clothing are pre-sterilized, and if they leave the packaging room they are re-sterilized before being allowed to reenter.

The presterilized "Qwip" cans are fed from a long oven which subjects them to sterilizing temperatures for 40 minutes. They then enter the packaging room on conveyor belts and, untouched by human hands, are equipped with valves (also presterilized). Filling is done on a continuous flow rotary filler which packs 160 cans per minute. An Avoset-devised multiple-gassing operation charges each can with nitrous oxide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propellant, establishing an internal equilibrium pressure of 95 pounds psi.

Automation is employed to such a degree that two technicians are able to handle all equipment-monitoring and visual inspection functions. When the cans emerge from the packaging room, the sterile part of the operation is complete. All that remains is pressure testing, application of plastic dispenser unit, case-packaging, and addition of a plastic cover to each can.

The product, even before it reaches the packaging room, has gone through a complicated sterilization procedure extending beyond the normal and familiar pasteurization of milk products. Avoset's management considers normal pasteurization to be a mere "holding" action which eliminates most, but not all, of the microorganisms which cause milk products to spoil or go stale. The goal of Avoset's process is total elimination of *all* microorganisms, not only in the cream, but in all cans, equipment and machinery which are involved in packaging the product after the cream itself has been sterilized.

A separate sterilizing room, connected to the packing area by pressure pipes, is used for the sterilization of the cream product. Upon entering the area, the cream (at all times enclosed in pipes which transport it) moves through a succession of flash-heating stations, interspersed with special equipment to homogenize and cool the product. The flash sterilization is controlled automatically in such a way as to prevent such high

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heat as may affect the taste or chemical composition of the cream.

Total sterilization of each cream molecule is accomplished by passing it through thermo-sterilizers in very thin layers under high pressure made possible by special pumps. Six 7,000-pound mixing vats, which automatically weigh the cream and keep it mixed to a predetermined temperature and consistency, feed a conduit which carries the cream through the sterilization area in a continuous flow process.

All told, the Avoset Gustine plant employs an average of only 14 workers in 50,000 square feet of floor space to turn out a daily capacity of more than 85,000 cans. Deliveries to distributors, packed 24 cans to the case, are made by refrigerated rail and truck. No shipment of "Qwip" leaves the plant without prior scrutiny of sample-cans in the company's laboratory, where each lot is rigidly checked for quality, pressure, and sterility. Holding time in the plant's temperature - controlled warehouse (kept at 45°) averages two weeks to insure that every available sterility test can be applied to each shipment prior to release for the market.

In addition to "Qwip" (a trademarked word for "quick whip"), Avoset also produces a variety of sterilized dairy products for military and civilian outlets. Included are flash-sterilized milk in quart cans; and sterilized table cream and sterilized whipping cream in half-pint glass jars and quart cans. But for sheer uniqueness and packaging complexity, "Qwip" very logically remains the showpiece of the Avoset product line.★

## Report from Japan

(*From Page* 53)

gas are mixed by pressure before being put in through the valve.

For reference, the most popular hair lacquer formulation in Japan is given:

Methyl alcohol ($CH_3OH$) — 160-180 grams
Shellac — 3-5%
Perfume — 0.7-1.2%
LP propellant — 30-40 grams

The liquid shellac is made by boiling 36% white lac, 30.4% $CH_3OH$, and 3.2% sodium oxide for seven to eight hours. Then 30.4% $CH_3OH$ is added, and finally a small quantity of dehydroacetic soda. This will get rid of impurities and bring the pH of the product to 6.8 to 7.1. ★

## Aerosol Paints

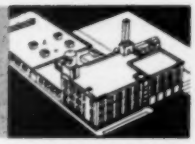
(*From Page* 42)

the absence of the diluent effect which occurs with conventional propellants and causes blushing, sagging, running, and similar paint delivery defects. Still another advantage is the fact that compressed gas propellants can be used at lower pressures than are practical for conventional propellants. This is somewhat offset by the necessity (with compressed gases) of using a somewhat more elaborate actuator which must provide mechanical atomization. The valve crimp must be absolutely tight because of the small quantity of propellant present initially.

Furthermore, the actuator and formulation itself must be designed with a special view toward clog-free operation. With fluorinated hydrocarbons, the user of aerosol paints is advised to turn over the can to clear the valve orifices of paint build-up, by means of a propellant "flushing." This approach to the clogging problem is not feasible with the small amount of propellant available with a compressed gas system.

Another mechanical problem incurred with compressed gas propellants is the previously stated need for somewhat more complex valves. During the past three or four years, a number of new valves have been developed to the commercial stage which are capable of coping with these problems. Thus we may expect the future to see a major expansion in the marketing of water-based paints which embody propellants of this type.★


MIDWEST

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## Public Relations

(*From Page 39*)

press, the aerosol company can become well known to its actual or prospective customers (and to its suppliers and creditors) by arranging to have technical men write full-fledged articles on new processes, new solutions to old problems, expected performance or shortcomings of specific components, and other aerosol subjects. Trade magazine editors are constantly on the lookout for such material, and if sufficient preparation has gone into them, and if the subject has been sufficiently investigated and brought up to date, there's a good chance of their landing in one of the many influential trade publications which are devoted partially or fully to aerosol subjects. It is a peculiar fact in the aerosol industry that the mere publication of a good technical article (under a byline) has the effect of establishing for the author the reputation of being an authority in whatever his subject. This situation, undoubtedly a throwback from the early years of the industry when such articles were few and far between, continues despite the fact that the industry is far from the rawboned youth of eight or ten years ago.

Such subjects can also be presented in formal papers before the Chemical Specialties Manufacturers Association, the Toilet Goods Association, the Society of Cosmetic Chemists, the Institute of Food Technologists, and the Packaging Institute, all of which are always on the lookout for good papers on aerosol subjects. The only drawback to this approach to public relations is that it sometimes takes months for the papers to be published.★

•

### *Prince Matchabelli Names 6*

Prince Matchabelli, Inc., New York, recently announced six separate sales appointments. Clark C. Hambley, vice-president in charge of advertising and promotion, was named to take on the additional responsibility for packaging and marketing of the newly-acquired Aziza line. Frank L. Stamberg, former manager of brand operations, will take on the additional job of general sales manager of the company.

Gerry Presson, former vice-president and general sales manager of Angelique, was appointed Northeast regional sales manager.

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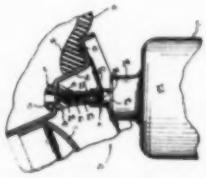
# New Aerosol Patents

**Listed below is a brief review of recent patents pertinent to the aerosol and related industries.**

**Complete copies of these patents may be obtained by writing to the Commissioner of Patents, U. S. Patent Office, Washington 25, D. C., and remitting 25 cents for each copy desired.**

2,925,103. VALVE ASSEMBLY. Issued Feb. 16 to Robert J. Kerr, Oak Park, and Edward H. Green, Addison, Ill., assignors to Kerr Chemicals, Inc., a corporation of Illinois.



In an inflating mechanism adapted for use with a pneumatic device having a restricted conduit type valve and the like, a container of liquefied gas having an outlet, the improvement comprising a valve assembly comprising a valve member and a tubular insertable member frictionally positionable within said valve member, said valve member including a valve body part having an aperture therein registering with the interior of said container, seal means between said valve member and tubular insertable member, and a plug valve normally closing the outlet in said container, said tubular insertable member including a sleeve having an annular radial disc formed thereon to determine the axial engagement position between said valve member, said tubular insertable member and said pneumatic device to be inflated.

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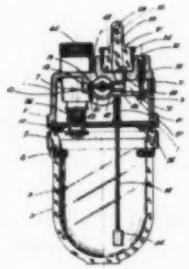
2,925,883. LUBRICANT AEROSOL GENERATOR. Issued Feb. 23 to Fred J. Everett, Chicago, assignor to Stewart-Warner Corp., Chicago.

An aerosol generating device of the type



in which fluid in a reservoir, subjected to a pressure greater than atmospheric pressure, is caused to flow into an aerosol generating passageway to be suspended in aerosol form in a fluid passing through the passageway, and in which means is provided for filling the reservoir during operation of the device, wherein said means comprises an element separating the reservoir from a source of fluid pressure higher than atmospheric pressure, an aperture in the element normally interconnecting the source of fluid pressure with the reservoir to subject the reservoir to a pressure higher than atmospheric pressure, a bore in the device generally coaxial with the aperture, a generally annular sleeve reciprocally disposed within the bore and extending through the aperture, and an O-ring secured to one end of the sleeve and engageable with the element for closing the aperture in one position of the sleeve, biasing means urging the sleeve to said one position, and a removable filler plug in the bore engaging the sleeve in a closed position of the plug to move the sleeve to a second position unseating the O-ring from the element.

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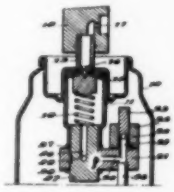
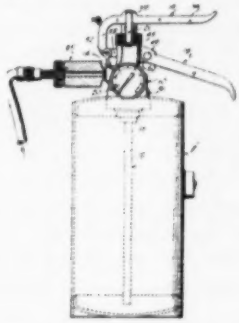
2,924,360. AEROSOL DISPENSERS AND LIKE PRESSURIZED PACKAGES. Issued Feb. 9 to Arthur J. Samuel, Pittsburgh, assignor to Gulf Research & Development Co., Pittsburgh.



An aerosol dispenser or like pressurized package comprising a receptacle having a manually operated discharge valve at its top and an eduction passageway reaching into the angle between the side wall and bottom of the receptacle, said eduction passageway comprising an upper section extending axially of the receptacle and a lower section movable bodily in an orbital path around said upper section, a connecting member rotatably mounted on the upper section with the greater part of its mass extending to one side of its axis of rotation and carrying said lower section laterally spaced from said upper section, the laterally spaced sections being in fluid communication through an internal flow passage in the connecting member, a first inlet to the eduction passageway at the end thereof adjacent the bottom of the receptacle and a second inlet thereto adjacent the top of the receptacle, means constituting a part of the connecting member adapted to slide along a portion of said eduction passageway and guided thereby to cover said second inlet when the receptacle is upright and to uncover the same when the receptacle is inverted, whereby the contents to be dispensed will be admitted to the eduction passageway in both upright and inverted positions, and whereby in intermediate, horizontal position the unbalanced weight of the connecting member causes it to assume a pendulous position with the end of the eduction passageway dipping into the contents at low level in the horizontally held receptacle.

•

2,924,280. FIRE EXTINGUISHERS. Issued Feb. 9 to Philip M. Carter, Ossining, N. Y., and Daniel Nardoza, Keyport, N. J., assignors to Leeder Manufacturing Co., Keyport.



In fire extinguisher construction, in combination, a discharge head directly connectable with the top of the container of a fire extinguisher including an upwardly and inwardly inclined valve seat, a valve member having a portion formed for engaging said seat in a metal to metal line contact on the upward movement of said valve member with respect to said seat, said valve member carrying a resilient packing element below said engaging portion for contacting said seat below said line to line contact, a stem extending upwardly from said valve member, an operating handle pivoted to said discharge head and formed for the operation of said valve by a downward movement thereof, and interengaging means between said valve stem and said handle for translating the movement of said handle to said valve, said interengaging means including means for precluding upward movement of said handle without consequent upward movement of said valve stem whereby when one lifts the fire extinguisher, including said container, by said handle any load imposed upon said valve member will be absorbed through said metal to metal line contact thereby protecting said packing element of said valve against injury.

•

### *Heyden Newport Plans Expansion*

Heyden Newport Chemical Co., New York, producer of Strobane, recently completed arrangements to place $17.5 million of its 5⅞% notes with The Prudential Insurance Co. of America. A major portion of the funds, to be provided by Prudential over the next two years, will be applied to an expansion program.

## Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however, many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

SCANDAL, for toilet water talcum powder, and bath oil. Filed Sept. 9, 1958 by Lanvin-Parfums, Inc., New York, reporting first use as 1937 (on toilet water).

PET HEAVEN, for repellent for fleas and ticks on cats and dogs. Filed Jan. 19, 1959 by Aids, Inc., Palm Beach, Fla., giving first use as Feb. 3 of previous year.

MAN ALIVE, for shaving cream. Filed May 18 by Colgate-Palmolive Co., New York, with first use claimed as May 15.

S-12, for spray ski wax. Filed Jan. 22, 1959 by The Marlad Corp., New York, claiming first use Jan. 14, of same year.

SSS-T!, for rust remover, coffee pot cleaner, and cleaner for plastic dishes. Filed July 23 by Fast Chemical Products Corp., Yonkers, N. Y., with first use given as July 1.

SPRAY MATES, for colognes and perfumes. Filed Dec. 22, 1958 by Mary Chess, Inc., New York, claiming first use as Nov. 26, 1958.

CLICHE, for toilet water essence. Filed Dec. 30, 1958 by Diedre Products Inc., Forest Hills, N. Y., giving first use as Dec. 10.

BLUE HEDGE, for toilet water. Filed June 22 by The Fuller Brush Co., Hartford, Conn., reporting first use May 9.

PRESIDENTIAL SUITE, for cosmetics for men, including shaving cream, shampoo, hair dressing, deodorant, and after shave lotion. Filed June 16 by Colgate-Palmolive Co., New York, claiming first use May 12.

MAN TRAP, for cologne. Filed June 16 by Colgate-Palmolive Co., New York, giving first use as May 11.

HIDDEN MAGIC, for hair fixative. Filed June 22 by The Procter & Gamble Co., Cincinnati, reporting first use June 9.

CHASER, for cologne, perfumes, deodorants, suntan lotion, and other cosmetics. Filed June 24 by Max Factor & Co., Hollywood, with first use reported as May 27.

LORD & MASTERS, for shaving cream, shampoo, after shaving lotion, hair dressing, and deodorant. Filed June 9 by Colgate-Palmolive Co., New York, with first use given as April 22.

SUN VEIL, for suntan preparation for protecting the skin against sunburn and repelling insects. Filed Dec. 18, 1958 by Southwestern Drug Corp., d.b.a. Red Arrow Laboratories, Waco, Tex., reporting first use as June 16 of same year.

INSTANT-KILL, for insecticide. Filed Jan. 9, 1959 by D & A Co., Inc., Bridgeport, giving first use Dec. 1, 1953.

DOG-S-CAT, for dog and cat repellent. Filed Dec. 12, 1958 by J. & L. Adikes, Inc., Jamaica, N. Y., giving first use a Nov. 12 of same year.

VO SOL, for pharmaceutical preparation used for the treatment of superficial infections, burns, and similar skin irritations. Filed Sept. 10 by The Denver Chemical Manufacturing Co., d.b.a. Wampole Laboratories, Stamford, Conn., claiming first use Aug. 3.

NOBLE 55, PARADIS PERDU, HEDLEY 51, and IVRE D'AMOUR, for perfumes and cologne. All four filed Nov. 24, 1958 by Hedley Inc., Cleveland, claiming first use May 26, 1956.

ARRAY, for hair dressing and conditioner. Filed June 4 by The Gillette Co., d.b.a. The Toni Co., Boston, with first use reported as May 25.

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### Midwest Consultants Add Line

Midwest Consultants, Inc., St. Louis, announces the addition of a second complete aerosol packaging line. The new line is a fully automatic straight line 800 series built by The Kartridg Pak Co.

Midwest Consultants specialize in filling products which they formulate for private label and name brand marketers.

Organized in 1934, Midwest's plant occupies 240,000 sq. ft. of space on seven acres of ground. Midwest employs over 250 people, including 26 graduate chemists and chemical engineers. Besides aerosols, Midwest, through its subsidiaries, manufactures biochemicals for medical research; manufactures a line of cosmetics; anodizes aluminum; manufactures paints and printing inks.

The new aerosol line gives Midwest almost 100% increase in capacity.

•

### Shulton Elevates Jackson

The appointment of Edmund Jackson as brand advertising manager, a new position, has been announced by Shulton, Inc., New York. He will handle advertising for "Desert Dri," "3-Way Curl Spray," "Tecnique Color-Tone," and another product.

Mr. Jackson has served as sales promotion manager since joining Shulton in 1957. Prior to joining Shulton, he was an account executive with Grey Advertising Agency. Before that he held various marketing and promotion capacities with Vick Chemical Co.


**Professional Directory**

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complete information on the following services will be sent to you on request

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- Feed Industry Services
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*Color brochure and price schedule available on request*

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# CLASSIFIED ADVERTISING

**Address all classified replies to Box Number c/o *Aerosol Age*, PO Box 31, Caldwell, N. J. Rates for "Help Wanted" advertisements are 20¢ per word; minimum charge $3.00. Rate for individuals seeking employment is 5¢ per word, $1.00 minimum. Advertisements of new machinery, products and services accepted at the rate of $10.00 per column inch. Minimum space, one inch. Copy closing date, 10th of preceding month. *Checks must accompany all orders.***

## FOR SALE

1 Aero filling line complete for food products, syrup, etc. consisting of — Federal Filler Crimper, Alpha 12 stem gasser, magnetic test tank, NU Way labeler, a product brand name for sale with line.

Write Box 212-Aerosol Age

## EQUIPMENT FOR SALE

Alpha Pressure Filler, completely integrated double track line—Product, crimp, and propellent charge electrical controls. In service until recent replacement by higher capacity line.

Write Box 213—Aerosol Age

## FOR SALE—
**Aerosol Filling Line—**

Mojonnier cold-fill, unused except for test run. Capacity — 40 units per minute. Will handle 3-oz. to 16-oz. cans.

Write Box 211—Aerosol Age

## HELP WANTED

**PRODUCTION-RESEARCH**

**Challenging opportunity for a chemical engineer to head newly created production and research division in well established and expanding company with young, aggressive management. We are seeking a man with ability and ambition to advance and join top executives.**

**Must have experience in Aerosols, Detergents and Chemical Specialties, with heavy administrative background in Production, Cost, Packaging, and New Product evaluation.**

**The company is located in New York City. Minimum travel is required.**

**All replies will be kept strictly confidential. Please send complete detailed resume including salary requirements, in first letter, to**

**Box 214, Aerosol Age**

### *Glidden, Firmenich Agree*

Firmenich, Inc., New York producer of essential oils and aromatics, recently concluded an agreement with The Glidden Co., Baltimore, to distribute certain aromatics of Glidden's Organic Chemicals Division in the U. S. and Canada. Under terms of the long-term agreement, Glidden will provide Firmenich with most of its aromatic products on an exclusive basis. Firmenich will have charge of all marketing and sales development programs for the products and will exchange information with Glidden.

Glidden's research group at Jacksonville, Fla., has created and patented processes for a wide range of synthetic terpene chemicals for perfumes and flavors. The new agreement does not affect Glidden's association with A. Boake, Roberts & Co., Ltd., in the development of improved processes for producing aromatic terpene chemicals.

### *ConCan Realigns Sales Mgrs.*

A realignment of assistant products sales managers in its Metal Division has been announced by Continental Can Co., New York

R. E. Gustafson, formerly a sales representative in Los Angeles, has been assigned to the processed food and milk can group. J. W. Leaycraft, formerly assistant products sales manager for this group, joins the industrial and household Products can group, covering metal containers for such products as paint, liquid detergents, chemicals, insecticides, varnishes and household deodorants.

P. N. Smith, also an assistant products sales manager in the industrial and household products group, is responsible for cans that package aerosol products.

J. K. Cooper continues as assistant product sales manager for meat, aluminum and non-processed food cans, and J. W. McMorrow remains in the same capacity for beer and carbonated beverage cans.

### *Hair Spray Use Way Up*

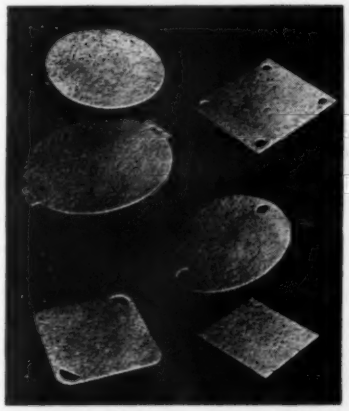
More and more women are using hair sprays, indicates a new survey conducted by *Good Housekeeping Magazine* among 1,765 members of its consumer panel. In 1958, 49% of the women covered by the study said they use sprays, compared with only 21% in 1955.

Perfumes also recorded marked gains in the *Good Housekeeping* survey, with 69% reporting that they use them as against 59% four years previously. Toilet water recorded a gain of only 1% from 1955 to 1959.

The survey showed that people still buy more dentifrices in drug stores than in any other retail outlet, but that this preference is slowly declining. The following figures were reported as the percentages of people who buy dentifrices from five different outlets:

| | 1955 | 1959 |
|---|---|---|
| Drug store..... | 60 | 48 |
| Food store..... | 37 | 44 |
| Department store. | 9 | 7 |
| Variety store.... | 7 | 7 |
| Door-to-door .... | 2 | 2 |


**For finer Aerosol Products Industry uses ERTEL ASBESTOS FILTER SHEETS and FILTERS**



***To fit most filters—10 Porosities***

**WRITE FOR TYPICAL PRODUCT APPLICATION CHARTS & GUIDE**

**ERTEL ENGINEERING CORP.**

**18 FAIR ST., KINGSTON, N. Y.**

Illustrative of the aerosol dominance of the perfume and cologne field are these ten pages of advertising in the March issue of *Beauty Fashion*, marketing magazine for the toilet goods industry. Aerosol advertising, geared to the packages' obvious glamour appeal, has apparently put that of conventional packaging to rout.

## Aerosols in Review

(*From Page 62*)

a large walk-in oven, which is maintained at a constant 100°F.

"In addition, for specific products, a one-month stability test is conducted at 130°F to determine a quick stability of the container with the formulation. We do not run any long-term tests at 130°F because most three-piece, side-seam containers, after long periods of storage at such high temperatures and subsequent high pressures, develop solder fatigue or solder collapse, resulting in a side-seam leak. When such a leak occurs, of course, the test is no longer valid and the results are useless.

"Samples are stored at room temperature and in the oven on their sides so the contents of the container can come in contact with both the valve mounting cup as well as the can. We also make a point of storing the cans so that the side-seam is always immersed in the liquid of the product."★

•

### Joseph Danilek Honored

Joseph Danilek, president of Mary Chess and Parfums Schiaparelli, New York, has been named a knight of the Sovereign Military Order of Malta, the oldest order of knighthood in existence. Investiture was held recently at St. Patrick's Cathedral, New York. He is widely known for his work in civic, charity, and church affairs.

•

### Boyle-Midway Names Three

Owen Carroll and Clark Glenn have been appointed product managers of the Boyle-Midway Division of American Home Products Corp., New York, and Donald J. Shea, formerly a product manager, was named assistant to the president.

Mr. Carroll, who will carry brand responsibility for "Sani-Flush" and new products, attended Stonehill College. He joined Boyle-Midway from the Marketing Department of J. Walter Thompson Advertising.

Mr. Glenn, an advertising agency executive for many years, joined Boyle-Midway in November, 1959, as assistant advertising manager. His brand responsibilities will be for "3-in-1 Oil," "Plastic Wood" and "Wizard Charcoal Lighter."

Mr. Shea has been with Boyle-Midway since 1956. He is a graduate of Georgetown University.

### Risdon's Copp Retires

Earl F. Copp, vice-president of The Risdon Manufacturing Co., Naugatuck, Conn., for 25 years, has retired from this position to become special consultant to the company. He will continue as a member of the firm's board of directors and executive committee.

Mr. Copp, who has been in the metal fabrication field for 47 years, directed the operations of Risdon's Cosmetic, Aerosol and Metal Goods Divisions. He joined Risdon in 1935 as assistant to the president, was elected a vice-president in 1936, and become a director in 1944.

A native of New York City, Mr. Copp began his business career there when he was 15. Two years later he moved to Colorado. From there he traveled to Labrador where he became secretary to the general manager of lumbering operations on Anticosti Island.

His introduction to metal fabrication came when he joined the Consolidated Safety Pin Co. as a junior executive in 1913. When he sold the firm's stock to the Chase Companies of Waterbury, Conn., Mr. Copp became its vice-president, general manager and a director of the Consolidated branch.

In 1930 he also became general manager of the manufacturing division of the Chase Brass and Copper Co.; general manager of its selling company, The American Brass and Copper Co., and a director of Steele and Johnson Manufacturing Co., all located in Waterbury. He held these positions until joining Risdon in 1935.

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### *Babbitt Elects New Directors*

B. T. Babbitt, Inc., marketer of aerosol and conventional household products, last month increased the size of its board of directors to 16 with the election of three new members. The three new directors are Donald B. Tansill, board chairman of M. Lowenstein & Sons, Inc., textile manufacturer; Paul L. Kohnstamm, president of H. Kohnstamm & Co., producer of flavors and other chemicals; and Victor D. Ziminsky, president of a business consulting organization bearing his name.

# OVER THE TRANSOM

AN AEROSOL room deodorant figured in one of the strangest stories yet to come out of the aerosol industry. As reported in the deft newspaper prose of Associated Press (March 13), the peculiar story read as follows:

"A hospital patient who wanted to freshen up his room a bit pressed the button on a can of air deodorant while he was watching TV. The channel changed on the remote-control TV set across the room.

"The patient, Edward McBride, pressed again — and got another program.

"Pressing and squirting, McBride kept switching channels as other patients at the Southside Hospital crowded in to watch. The can worked on ten other hospital sets, but failed on five. Other push-button cans did nothing but spray deodorant.

"A TV specialist explained that through some fluke, one can of spray created an ultra-high frequency sound wave that triggered the changing mechanism in the sets."

* * *

**Although details are hard to come by, G. Barr & Co. last month discontinued operations at its Bronx, N. Y. plant, and will consolidate all of its operations in Chicago. Until two years ago, Barr operated three plants, the one in Chicago, the one in Bronx, and another in Los Angeles.**

* * *

*Checking on rumors about odor problems holding up development of Delrin containers for cosmetic products, our editorial staff comes up with the following facts: One particular product formulation did produce a formaldehyde odor (which was disclosed after long-term shelf testing) but this was judged to be the result of a so-far undetermined product component; and has happened with only the one product. While researchers are tracking down the cause, successful shelf-testing is being carried out with a wide range of other products.*

* * *

Lif-O-Gen, Daniel Gattone's highly successful pressurized oxygen inhalent, has been bought by the Linde Division of Union Carbide, reports the *New York Times*. Container holds seven gallons of pure U.S.P. oxygen under pressure. Mr. Gattone is co-holder of the Birch-Gattone aerosol pharmaceutical patents.

* * *

*Shulton deserves some kind of special tribute for its perseverance in getting its public service film "The Race for Space" onto television. Turned down by CBS, NBC, and ABC (all of which have firm policies that their staffs must produce such films) Shulton last month created a "fourth network" of local stations to show the film during the week of April 24. The move is regarded as a major one in breaking what has been termed the "strangle hold" of the major networks on what the public can see.*

* * *

Speaking of television, the Jack Parr Show on NBC television, seems to be advertising more and more aerosol products in relation to conventional products. One day last month four aerosol products were advertised in a one-hour period.

* * *

**Herb Shriner, Hoosier comedian of television fame, last month poked fun at "AromaRama", aerosol movie scenting device, on the "Revlon Revue" variety program on March 3. He said the first few showings of the film "attracted an audience of 100,000—*flies!*"**

* * *

The story on the European aerosol industry in the March issue of *Aerosol Age* ("European Industry Completes Best Year of Production") contained two inaccuracies reporting industry happenings in Great Britain. In mentioning suppliers of valves for the British market, the author somehow failed to mention Risdon's licensee, Bespak Industries, Ltd., which has become a major producer for that country. Also, in announcing the price of tinplate containers, the price of three pence per six-ounce container was quoted as being the equivalent of six cents U. S. Actually, it is the equivalent of 3.5 cents U. S.

# PETERSON FILLS *Both* ... LIQUIDS AND AEROSOLS

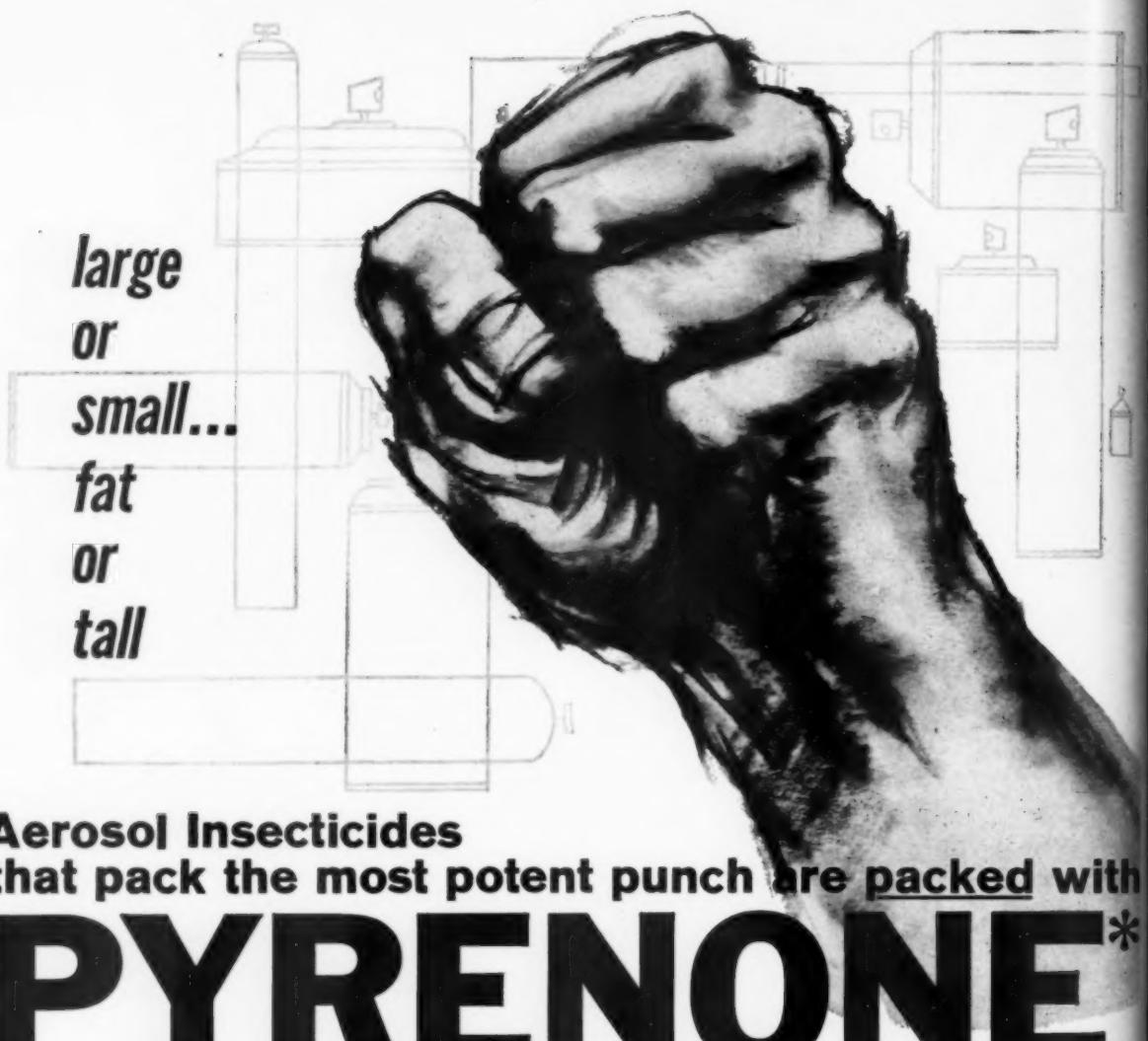
A *Complete* Packaging Service That Can Mean Important Freight Savings To You ...

**AEROSOLS ...**
filled by efficient, accurate, high-speed pressure or cold-filling methods with halocarbon or hydrocarbon propellants (or a combination of both).

**LIQUIDS ...**
filled in metal, glass or *plastic* in any size from 2-ounce containers to 55-gallon drums.

And when your products must be sent to common destinations in different types of packages, Peterson can do all the filling and, then, combine the various types into dollar-saving single shipments. For complete details, write, wire or phone ...

**PETERSON**
*Filling and Packaging Co.*
HEGELER LANE • DANVILLE, ILLINOIS




## Aerosol Insecticides that pack the most potent punch are packed with

# PYRENONE*

Insecticide applications and formulation requirements for the home, garden, farm and industry, differ from one container to another... from one need to another.

Yet, Pyrenone meets the needs of the world's better formulators, PCO's and fillers. A combination of pyrethrins and piperonyl butoxide, Pyrenone is a time-tested, maximum control ingredient. "Pyrethrins" and "Piperonyl Butoxide" on the label spell quality... non-toxic, effective knockdown and kill, instantaneous flushing—the action your customers demand. Highly effective against resistant flies and roaches, Pyrenone can put the "punch" in your old insecticides, lift sales, too!

Pyrenone® winner of the CANNER PACKER AWARD — GOLD MEDAL — FOR CREATIVE PROGRESS IN PROCESSING FOODS

Pyrenone meets the principal requirements of an ideal insecticide:

1. Safe to human and warm blood animals.
2. Legally recognized by government agencies.
3. Effective against a wide range of insects.
4. Fast knockdown and kill.
5. Effective in small amounts.
6. Lends itself to a wide range of formulations.
7. More stable than Pyrethrins alone.
8. Economical.

*Give your insecticide a boost... Reformulate with Pyrenone!*

Consult your nearest Fairfield representative for specific formulation information and literature.

**Reg. U. S. Pat. Off. FMC*

*Putting Ideas to Work*

FOOD MACHINERY AND CHEMICAL CORPORATION

**Fairfield Chemicals**

**Sales Headquarters**

**441 LEXINGTON AVENUE, NEW YORK 17, N.Y.**

**Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.**